

DESCRIPTION

Recessed medium distribution LED open downlight luminaire with 4 inch square aperture utilizing a LED array. Platform is suitable for commercial applications. Insulation must be kept 3" from top and sides of housing. Platform + element combination produces square distribution with excellent light control and low aperture brightness.

Catalog #		Type
Project		
Comments		Date
Prepared By		

SPECIFICATION FEATURES

Frame

Galvanized steel plaster frame with integral bar hanger receivers. Setscrews provide positive horizontal locking.

Collar

Matte black aluminum collar adjusts vertically for 1/2" - 2" thick ceilings and can be rotated ± 7.5° thru the aperture. Integral gun sights facilitate the use of guide strings or laser lines. Shipped with a paint overspray protector.

Housing

Steel housing painted matte black for a visually dark interior. Removable hinged cover allow for top access. All fasteners are captive.

Bar Hangers

Captive preinstalled bar hangers adjust from 8-1/2" to 24" wide; pass thru allows shortening without removal. Captive nail penetrates standard and engineered lumber. Mounting flange levels platform with ceiling. Integral clip attaches direction to tee grid.

Universal Mounting Bracket

Accepts 1/2" EMT, C channel and bar hangers and adjusts 3" vertically from above the ceiling.

Gaskets

Closed cell gaskets achieve restrictive airflow requirements without additional caulking.

Lamp Module

Can be removed from above the ceiling or thru the aperture for service or change to alternate module type. Electrical quick disconnect provides tool-less connection to driver.

LED Array

Field interchangeable and upgradable light engine provides a uniform source with high efficiency and no pixilation. Available in various color temperatures. Select color rendering index (CRI) of 80 or 90 minimum providing excellent color quality. Color accuracy within 2 SDCM.

Primary Reflector

Segmented Miro® upper reflector yields a smooth square beam with uniform distribution. Diffuse glass mixing dome provides shielding to source and excellent color over angle uniformity over rated life.

Lower Reflector

Die cast aluminum parabolic reflector is seamless and provides for 55° cutoff. Self-flanged standard; may be installed rimless with optional rimless adapter.

Trim Retention

Mousetrap type springs pull flange tight to ceiling. Light trap eliminates spill light at edge of flange and reflector.

Junction Box

(7) 1/2" trade size pry outs, (3) non-metallic cable. Listed for (8) #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring. Wago® quick connects for field wiring.

Driver

Integral constant current driver provides noise free operation. Continuous, flicker-free 1% dimming, available with 2 or 3 wire phase cut, 0-10V analog and EcoSystem/DALI or DMX digital control interfaces. The DALI option is Fifth Light compatible.

Emergency Option

Provides 90 minutes of standby lighting meeting most life safety codes for egress lighting. Integral charge indicator and test switch. The maximum battery pack ambient is 50°C.

Compliance

cULus listed for damp locations. Restrictive airflow per ASTM E283. EMI/RFI emissions per FCC 47CFR Part 15 class A limits and suitable for commercial use. Contains no mercury or lead and RoHS compliant. Zhaga certified luminaire. Photometric testing in accordance with IES LM79. LED life testing in accordance with LM80.

Warranty

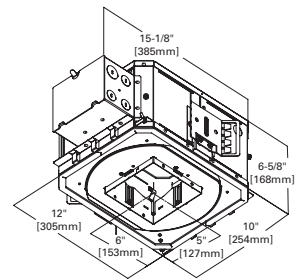
5 year warranty.



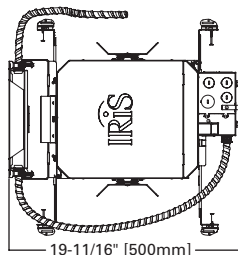
PN4LED E4DC

Medium Distribution
LED Open Downlight

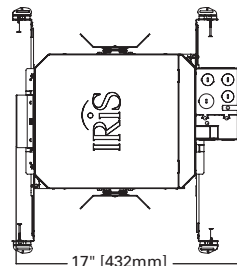
4-Inch Square Aperture



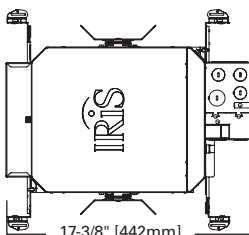
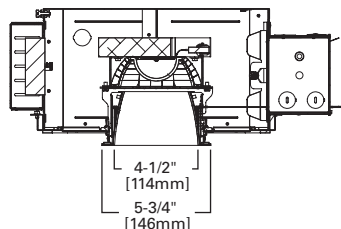
EM Option



15W & 20W
Option




33W Option



Refer to ENERGY STAR® Qualified Products List. Can be used to comply with California Title 24 High Efficacy requirements. Certified to California Title 20 Appliance Efficiency Database.



Cooper Lighting Solutions is a founding member of the Zhaga Consortium


Delivered Performance		V827	V830	V835	V840	V927	V930	V935	V940
	CRI (Min)	80	80	80	80	90	90	90	90
	R9 (Min)	0	0	0	0	50	50	50	50
	CCT (K5)	2700	3000	3500	4000	2700	3000	3500	4000
	SDCM	2-Step							
	Life (L70)	50,000 Hours							
	LPW*	65	66	68	71	53	53	57	65
	Lumens	15W	1056	1079	1111	1150	863	859	929
20W		1473	1506	1550	1605	1204	1199	1296	1483
33W		2091	2138	2201	2279	1710	1703	1840	2105
*Performance data based on goniometer measurements with E010 driver option and E4DCMW lower shielding reflector.									

ORDERING INFORMATION

(Order housing platform and optical element separately)

Lamp Module	Wattage	Light Engine	Driver	Options
<p>PN4LED = 4" square LED housing, non-IC, airtight</p> <p>PN4LEDCP = 4" square LED housing, non-IC, CCEA listed for City of Chicago plenum requirements</p>	<p>15 = 15 Watts</p> <p>20 = 20 Watts</p> <p>33 = 33 Watts</p>	<p>V827 = Bridgelux Vero Series, Zhaga certified, 80 CRI min, 2700 K CCT</p> <p>V830 = Bridgelux Vero Series, Zhaga certified, 80 CRI min, 3000 K CCT</p> <p>V835 = Bridgelux Vero Series, Zhaga certified, 80 CRI min, 3500 K CCT</p> <p>V840 = Bridgelux Vero Series, Zhaga certified, 80 CRI min, 4000 K CCT</p> <p>V927 = Bridgelux Vero Series, Zhaga certified, 90 CRI min, 2700 K CCT</p> <p>V930 = Bridgelux Vero Series, Zhaga certified, 90 CRI min, 3000 K CCT</p> <p>V935 = Bridgelux Vero Series, Zhaga certified, 90 CRI min, 3500 K CCT</p> <p>V940 = Bridgelux Vero Series, Zhaga certified, 90 CRI min, 4000 K CCT</p>	<p>E010 = 120 – 277V 50/60Hz 0-10V analog 1% dimming</p> <p>E5LT = 120 – 277V 50/60Hz DALI 1% dimming</p> <p>EDMX = 120 – 277V 50/60Hz DMX 1% dimming</p> <p>1ELTE = 120V 60Hz leading edge 1% dimming, Lutron A-Series</p> <p>EL3D = 120 – 277V 50/60Hz 3-wire and EcoSystem 1% dimming, Lutron A-Series</p>	<p>IEM = Emergency battery pack with integral test switch (15W and 20W only) (Not available in CP version)</p>
Element	Texture	Finish	Flange Style	Accessories
<p>E4DC = 4" Open Die Cast Reflector</p>	<p>[Blank] = Smooth</p>	<p>Painted Finishes</p> <p>MB = Matte Black</p> <p>MW = Matte White</p> <p>W = Gloss White</p> <p>MMS = Matte Metallic Silver</p>	<p>[Blank] = Self-flanged</p> <p>RL = Rimless, Use with Rimless Adapter</p>	<p>RA4X4 = Rimless adapter for 4" housing platforms</p> <p>L4X4HEX = Matte black hex cell louver</p>

LIGHTING FACTS



Light Output (Lumens) **1079**

Watts **16**

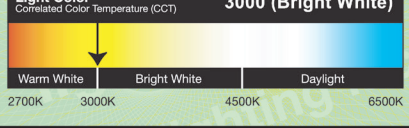
Lumens per Watt (Efficacy) **67.44**

Color Accuracy **80**

Color Rendering Index (CRI)

Light Color **3000 (Bright White)**

Correlated Color Temperature (CCT)




2700K 3000K 4500K 6500K

Warm White Bright White Daylight

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-LMLWC8 (9/25/2015)
Model Number: PN4LED15V8301ELTE E4DCMW [Upgrade : 9/25/2015]
Type: Luminaire - Downlight



Light Output (Lumens) **859**

Watts **16**

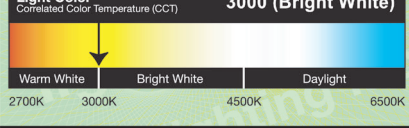
Lumens per Watt (Efficacy) **53.69**

Color Accuracy **90**

Color Rendering Index (CRI)

Light Color **3000 (Bright White)**

Correlated Color Temperature (CCT)



2700K 3000K 4500K 6500K

Warm White Bright White Daylight

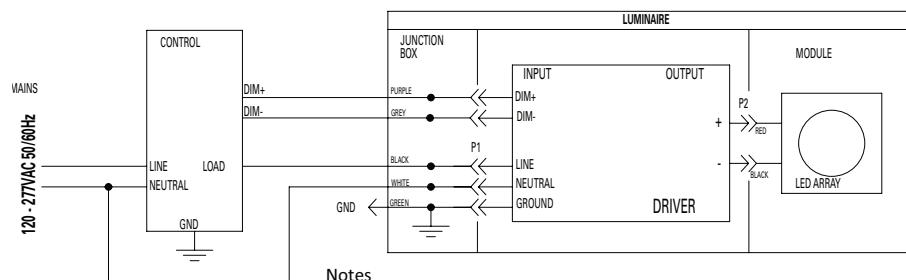
All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-QHSTV1 (9/25/2015)
Model Number: PN4LED15V9301ELTE E4DCMW [Upgrade : 9/25/2015]
Type: Luminaire - Downlight

WIRING DIAGRAM - E010

WIRING DIAGRAM



Notes

- Consult controls manufacturer for detailed wiring and conditions of acceptability
- Input voltage contingent on control and driver options selected
- Field wiring to confirm to all national and local codes

ENERGY DATA

ENERGY DATA			
E010 - 0-10V			
Input Voltage		120V	277V
15W	Input Power (W)	14.45	15.18
	Input Current (A)	0.123	0.069
	Inrush Peak (A)	0.998	2.328
	Inrush Duration (µs)	115	132
	Input Power (W)	20.80	21.3
20W	Input Current (A)	0.175	0.088
	Inrush Peak (A)	0.977	2.4
	Inrush Duration (µs)	115	126
	Input Power (W)	33.57	33.26
	Input Current (A)	0.287	0.128
33W	Inrush Peak (A)	0.978	2.468
	Inrush Duration (µs)	118	138
	T Ambient -40 - +40°C		
	Power Factor ≥ 0.90		
	Sound Rating Class A		
THD ≤ 20%			

COMPATIBLE CONTROLS - E010

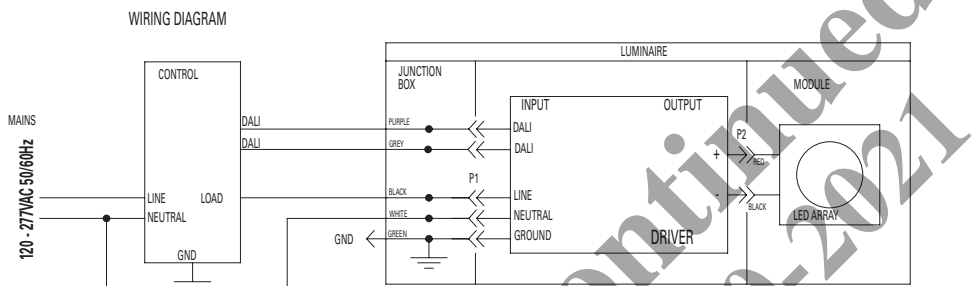
Manufacturer	Series	Model	15W					20W					33W				
			Minimum Luminaires	Maximum Luminaires	Maximum Measured	Minimum Measured	LE Start Time	Minimum Luminaires	Maximum Luminaires	Maximum Measured	Minimum Measured	LE Start Time	Minimum Luminaires	Maximum Luminaires	Maximum Measured	Minimum Measured	LE Start Time
Vantage	LV0S	LV0S-0-10-PWM	1	18	94%	0%	1.1	1	18	99%	0%	2.8	1	18	95%	0%	2.9
Savant		LMD-ELV120	--	--	100%	3%	<1s	--	--	100%	2%	<1s	--	--	100%	1%	<1s
Crestron	Green Light	CLS-EXP-DIMFLV	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Crestron	Green Light	DIN-4DIMFLV4 ¹	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Crestron	Green Light	GLX-DIMFLV8	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Crestron	Green Light	GLXP-DIMFLV8	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Crestron	Green Light	DIN-A08	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Cooper Lighting Solutions	iLumin	SC277-06-UN-1P	1	102	100%	0%	>1s	1	76	100%	0%	>1s	1	46	100%	1%	<1s
Cooper Lighting Solutions	GreenGate	CK4A	1	76	100%	0%	<1s	1	57	100%	0%	<1s	1	34	100%	1%	<1s

¹ Non-applicable for 277V, but 120V and 230V.
 -- Contact dimmer manufacturer for additional information.

COMPATIBLE CONTROLS - E010

Manufacturer	Series	Model	15W		Maximum Measured	Minimum Measured	LE Start Time	20W		Maximum Measured	Minimum Measured	LE Start Time	33W		Maximum Measured	Minimum Measured	LE Start Time
			Minimum Luminaires	Maximum Luminaires				Minimum Luminaires	Maximum Luminaires				Minimum Luminaires	Maximum Luminaires			
Cooper Lighting Solutions	Slide	SF10	1	64	100%	0%	<1s	1	48	100%	0%	<1s	1	29	100%	1%	<1s
Cooper Lighting Solutions	Decorator	DF10	1	64	100%	0%	>1s	1	48	100%	0%	<1s	1	29	98%	1%	<1s
LUTRON	Diva	DVTV	--	--	100%	0%	<1s	--	--	100%	0%	<1s	--	--	98%	1%	<1s
LUTRON	Nova T	NTFTV	--	--	100%	0%	<1s	--	--	100%	0%	<1s	--	--	97%	1%	<1s
Leviton	IllumaTech	IP710	--	--	90%	0%	<1s	--	--	100%	0%	<1s	--	--	98%	1%	<1s

WIRING DIAGRAM - E5LT

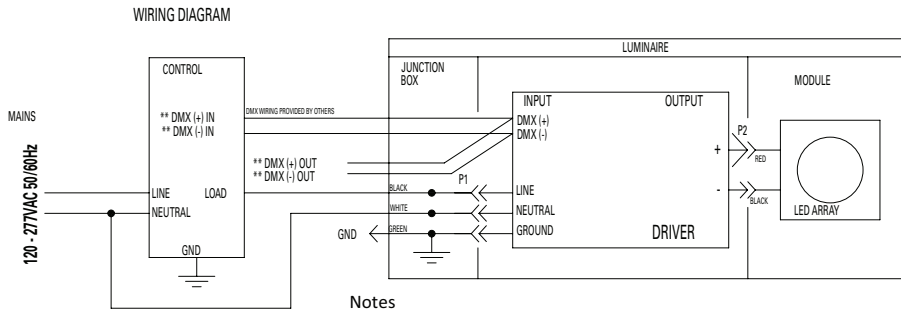


- Notes
- Consult controls manufacturer for detailed wiring and conditions of acceptability
 - Input voltage contingent on control and driver options selected
 - Field wiring to confirm to all national and local codes

ENERGY DATA

ENERGY DATA			
E5LT - DALI			
Input Voltage		120V	277V
15W	Input Power (W)	14.24	15.2
	Input Current (A)	0.12	0.068
	Inrush Peak (A)	1.04	2.36
	Inrush Duration (µs)	115	133
20W	Input Power (W)	20.71	21.28
	Input Current (A)	0.174	0.087
	Inrush Peak (A)	1.05	2.015
	Inrush Duration (µs)	121	135
33W	Input Power (W)	33.46	33.29
	Input Current (A)	0.28	0.128
	Inrush Peak (A)	0.953	2.128
	Inrush Duration (µs)	116	138
T Ambient -40 - +40°C			
Power Factor ≥ 0.90			
Sound Rating Class A			
THD ≤ 20%			

WIRING DIAGRAM - EDMX



Notes

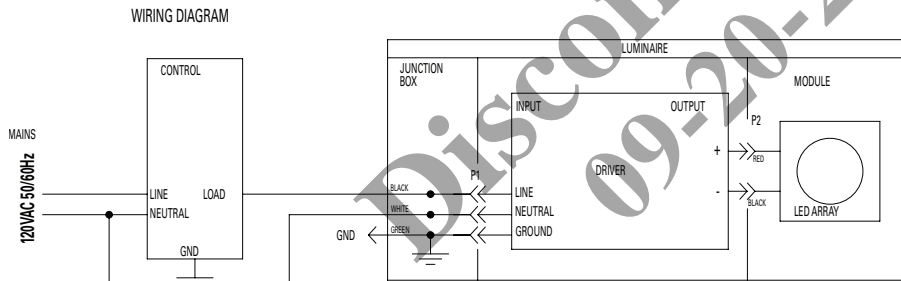
- Consult controls manufacturer for detailed wiring and conditions of acceptability
- Input voltage contingent on control and driver options selected
- Field wiring to confirm to all national and local codes

** DMX 512 WIRING FURNISHED BY OTHERS.
ALL DMX WIRING SHALL BE COMPLETED IN FIELD PER ANSI E1.112008

ENERGY DATA

ENERGY DATA			
EDMX - DMX			
Input Voltage		120V	277V
15W	Input Power (W)	14.5	15.72
	Input Current (A)	0.126	0.091
	Inrush Peak (A)	1.66	3.87
	Inrush Duration (µs)	128	140
20W	Input Power (W)	20.52	21.53
	Input Current (A)	0.176	0.11
	Inrush Peak (A)	1.58	3.79
	Inrush Duration (µs)	133	141
33W	Input Power (W)	33.57	34.12
	Input Current (A)	0.283	0.146
	Inrush Peak (A)	1.533	3.76
	Inrush Duration (µs)	131	141
T Ambient -40 - +40° C			
Power Factor ≥ 0.90			
Sound Rating Class A			
THD ≤ 20%			

WIRING DIAGRAM - 1ELTE



Notes

- Consult controls manufacturer for detailed wiring and conditions of acceptability
- Input voltage contingent on control and driver options selected
- Field wiring to confirm to all national and local codes
- Phase cut dimming at 120V input only.

ENERGY DATA

ENERGY DATA			
1ELTE = LE Phase Cut			
Input Voltage		120V	
15W	Input Power (W)	16.3	
	Input Current (A)	0.14	
	Inrush Peak (A)	1.065	
	Inrush Duration (µs)	117	
20W	Input Power (W)	23.2	
	Input Current (A)	0.195	
	Inrush Peak (A)	1.152	
	Inrush Duration (µs)	72	
33W	Input Power (W)	33.7	
	Input Current (A)	0.283	
	Inrush Peak (A)	1.216	
	Inrush Duration (µs)	72	
T Ambient -40 - +40° C			
Power Factor ≥ 0.90			
Sound Rating Class A			
THD ≤ 20%			

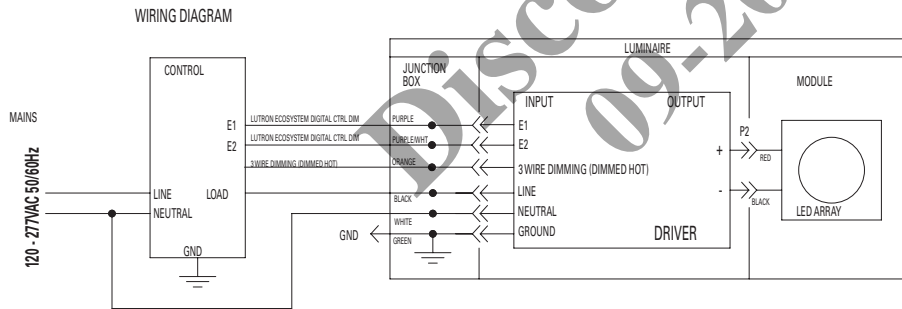
COMPATIBLE CONTROLS - 1ELTE

Manufacturer	Series	Model	15W		Maximum Measured	Minimum Measured	LE Start Time	20W		Maximum Measured	Minimum Measured	LE Start Time	33W		Maximum Measured	Minimum Measured	LE Start Time
			Minimum Luminaires	Maximum Luminaires				Minimum Luminaires	Maximum Luminaires				Minimum Luminaires	Maximum Luminaires			
Lutron	Nova T	NTLV-600-CPN0199	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	Maestro Wireless	MRF2-6ND-120	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	RadioRA2 1000 W	RRD-10ND	1	13	100%	1%	<1s	1	13	100%	1%	<1s	1	13	100%	1%	<1s
Lutron	RadioRA2 Adaptive Dimmer	RRD-6NA	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	RadioRA 600 W	RA-6ND	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	RadioRA 1000 W	RA-10ND	1	13	100%	1%	<1s	1	13	100%	1%	<1s	1	13	100%	1%	<1s
Lutron	HomeWorks QS 600 W	HQRD-6ND	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	HomeWorks QS 1000 W	HQRD-10ND	1	13	100%	1%	<1s	1	13	100%	1%	<1s	1	13	100%	1%	<1s
Lutron	HomeWorks QS Adaptive Dimmer	HQRD-6NA	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	HomeWorks QS WPM	HQRJ-WPM-6D-120	1	10	100%	1%	<1s	1	10	100%	1%	<1s	1	10	100%	1%	<1s
Lutron	HomeWorks 600 W Dimmer	HRD-6ND	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	HomeWorks 1000 W dimmer	HWD-10ND, HRD-10ND	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
	HomeWorks WPM	HWI-WPM-6D-120	1	10	100%	1%	<1s	1	10	100%	1%	<1s	1	10	100%	1%	<1s
Lutron	GRAFIK Eye QS	QSGR-, QSGRJ-	1	10	100%	1%	<1s	1	10	100%	1%	<1s	1	10	100%	1%	<1s
	GRAFIK Eye 3000	GRX-3100, GRX-3500	1	10	100%	1%	<1s	1	10	100%	1%	<1s	1	10	100%	1%	<1s
Lutron	RPM-4U Module (LCP, HomeWorks,	HW-RPM-4U-120,	1	26	100%	1%	<1s	1	26	100%	1%	<1s	1	26	100%	1%	<1s
	GRAFIK Systems, Quantum)	LP-RPM-4U-120															
Lutron	RPM-4A Module (LCP, HomeWorks,	HW-RPM-4A-120,	1	13	100%	1%	<1s	1	13	100%	1%	<1s	1	13	100%	1%	<1s
	GRAFIK Systems, Quantum)	LP-RPM-4A-120															
Lutron	GP Panels	Various	1	26	100%	1%	<1s	1	26	100%	1%	<1s	1	26	100%	1%	<1s
Lutron	Stanza	SZ-6ND	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	"Ariadni® C•L® 250 W dimmer"	AYCL-253P-	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	"Diva® C•L® 250 W dimmer"	DVCL-253P- S	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
		DVSCCL-253P	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s

Manufacturer	Series	Model	15W		Maximum Measured	Minimum Measured	LE Start Time	20W		Maximum Measured	Minimum Measured	LE Start Time	33W		Maximum Measured	Minimum Measured	LE Start Time
			Minimum Luminaires	Maximum Luminaires				Minimum Luminaires	Maximum Luminaires				Minimum Luminaires	Maximum Luminaires			
Vantage	Enclosure Module	SDM12-EM	1	21	95.1%	1.0%	1.90	1	17	95.3%	1.0%	1.70	1	17	98.7%	1.1%	1.7
Vantage	Enclosure Module	EDIMMOD	1	31	95.8%	0.9%	1.90	1	25	96.2%	1.0%	1.80	1	30	95.8%	1.1%	2.2
Vantage	ScenePoint	DS / RD	1	7	95.1%	1.0%	1.90	1	4	95.3%	1.0%	1.70	1	7	98.7%	1.1%	1.7
Crestron	Green Light	GLX-DIM6	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Crestron	Green Light	CLX-2DIM8	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	-- ¹
Crestron	Green Light	GLXX-2DIM8	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	-- ¹
Crestron	Green Light	CLS-EXP-DIM	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	-- ¹
Crestron	Green Light	CLS-C6	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	-- ¹
Crestron	Green Light	CLW-DIMEX	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	-- ^{1, 2}
Crestron	Green Light	CLX-1DELV4	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Crestron	Green Light	DIN-1DIMU4	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Cooper Lighting Solutions	ilumin	SC277-06-UN-1P	1	38	99%	0%	>1s	1	28	99%	0%	<1s	1	17	100	1%	<1s
Savant		LMD-8120	--	--	100%	3%	<1s	--	--	100%	3%	<1s	--	--	100%	2%	<1s
Savant		LMD-IN120	--	--	100%	4%	<1s	--	--	100%	4%	<1s	--	--	100%	3%	<1s
Savant		WCD-101xx	--	--	100%	0.03	<1s	--	--	100%	0.03	<1s	--	--	100%	0.02	<1s

¹ Minor buzzing. ² Must connect neutral.

WIRING DIAGRAM - EL3D



Notes

- Consult controls manufacturer for detailed wiring and conditions of acceptability
- Input voltage contingent on control and driver options selected
- Field wiring to confirm to all national and local codes
- Phase cut dimming at 120V input only.

ENERGY DATA

ENERGY DATA			
EL3D - Lutron L3D			
Input Voltage	120V	277V	
15W	Input Power (W)	15.24	15.34
	Input Current (A)	0.13	0.065
	Inrush Peak (A)	1.215	2.75
	Inrush Duration (µs)	150	169
20W	Input Power (W)	22.05	21.91
	Input Current (A)	0.187	0.087
	Inrush Peak (A)	1.343	2.693
	Inrush Duration (µs)	147	162
33W	Input Power (W)	36.04	35.7
	Input Current (A)	0.302	0.136
	Inrush Peak (A)	1.283	2.663
	Inrush Duration (µs)	155	163
T Ambient -40 - +40°C			
Power Factor ≥ 0.90			
Sound Rating Class A			
THD ≤ 20%			

COMPATIBLE CONTROLS - EL3D

Manufacturer	Series	Part Number		15W, 20W, and 33W (120V)		15W, 20W, and 33W (277V)		Maximum Measured Light Output	Minimum Measured Light Output	LE Start Time ^{1,2}
				Minimum Luminaires	Maximum Luminaires	Minimum Luminaires	Maximum Luminaires			
		120V	277V							
Lutron	Nova T*®	NTF-10-	NTF-10-277-	1	41	1	44	100%	1%	≤1.5s
Lutron		NTF-103P-	NTF-103P-277-	1	20	1	33	100%	1%	≤1.5s
Lutron	Nova®	NF-10-	NF-10-277-	1	41	1	44	100%	1%	≤1.5s
Lutron		NF-103P-	NF-103P-277-	1	20	1	33	100%	1%	≤1.5s
Lutron	Vareo®	VF-10-	-	1	20	-	-	100%	1%	≤1.5s
Lutron	Skylark®	SF-10P-	SF-12P-277-	1	20	1	33	100%	1%	≤1.5s
Lutron		SF-103P-	SF-12P-277-3	1	20	1	33	100%	1%	≤1.5s
Lutron	Diva®	DVF-103P-	DVF-103P-277-	1	20	1	33	100%	1%	≤1.5s
Lutron		DVSCF-103P-	DVSCF-103P-277-	1	20	1	33	100%	1%	≤1.5s
Lutron	Ariadni®	AYF-103P-	AYF-103P-277-	1	20	1	44	100%	1%	≤1.5s
Lutron	Vierti®	VTF-6A-		1	15	1	33	100%	1%	≤1.5s
Lutron	Maestro®	MAF-6AM-	MAF-6AM-277-	1	15	1	20	100%	1%	≤1.5s
Lutron		MSCF-6AM-	MSCF-6AM-277-	1	15	1	20	100%	1%	≤1.5s
Lutron	Maestro Wireless®	MRF2-F6AN-DV-		1	15	1	33	100%	1%	≤1.5s
Lutron	RadioRA® 2	RRD-F6AN-DV-		1	15	1	33	100%	1%	≤1.5s
Lutron	HomeWorks® QS	HQRD-F6AN-DV		1	15	1	33	100%	1%	≤1.5s
Lutron	Interfaces1	PHPM-3F-120		1	41	-	-	100%	1%	≤1.5s
		PHPM-3F-DV		1	41	1	88	100%	1%	≤1.5s
Lutron	GP Dimming Panels	Various		1	41	1	88	100%	1%	≤1.5s

¹ For use with 3-wire controls or Commercial Systems, RadioRA®2 Systems or Home Systems applications.

² Models available with low end turn-on time ≤ 1 second

COMPATIBLE CONTROLS - EL3D

Manufacturer	Series	Part Number		15W, 20W, and 33W (120V)		15W, 20W, and 33W (277V)		Maximum Measured Light Output	Minimum Measured Light Output	LE Start Time ^{1,2}
				Minimum Luminaires ³	Maximum Luminaires ³	Minimum Luminaires ³	Maximum Luminaires ³			
		120V	277V							
Lutron	PowPak® dimming module with EcoSystem®	RMJ-ECO32-DV-B		1	32	1	32	100%	1%	≤1.5s
Lutron	Energi Savr Node™ with EcoSystem®	QSN-1ECO-S, QSN-2ECO-S		1	64	1	64	100%	1%	≤1.5s
Lutron	GRAFIK Eye® QS with EcoSystem®	QSGRJ-_E, QSGR-_E	-	1	64	1	64	100%	1%	≤1.5s
Lutron	Quantum®	Various		1	64	1	64	100%	1%	≤1.5s

¹ For use with 3-wire controls or Commercial Systems, RadioRA®2 Systems or Home Systems applications.


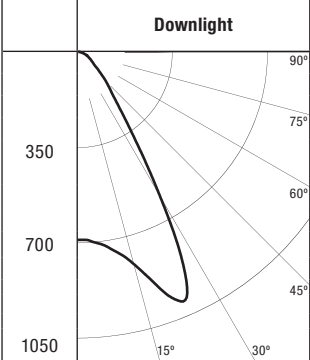
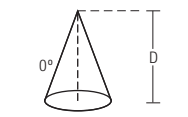
² Models available with turn-on time ≤ 1 second

³ Per EcoSystem® link

FINISH MULTIPLIERS

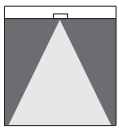
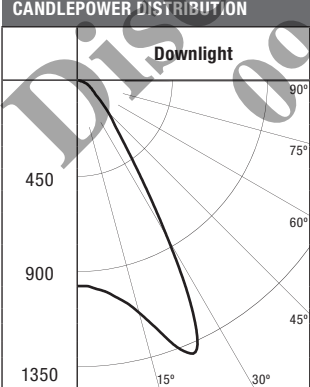
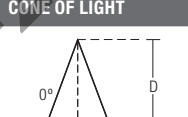
	MB	MW	W	MMS
[Blank] = Smooth	0.76	1.04	1.04	0.82

PHOTOMETRICS

<p>Test Number P169325 Platform PN4LED 15V8301ELTE Element E4DCMW Lumens 1079 Efficacy 66.2 Lm/W SC 1.19</p> 	<p>CANDLEPOWER DISTRIBUTION</p> <p>Downlight</p> 	<p>CONE OF LIGHT</p>  <table border="1"> <thead> <tr> <th>D</th> <th>FC</th> <th>L</th> <th>W</th> </tr> </thead> <tbody> <tr><td>5.5'</td><td>25.9</td><td>6.2</td><td>6.2</td></tr> <tr><td>7'</td><td>16</td><td>8</td><td>8</td></tr> <tr><td>8'</td><td>12.3</td><td>9.2</td><td>9.2</td></tr> <tr><td>9'</td><td>9.7</td><td>10.2</td><td>10.4</td></tr> <tr><td>10'</td><td>7.8</td><td>11.4</td><td>11.4</td></tr> <tr><td>12'</td><td>5.4</td><td>13.8</td><td>13.8</td></tr> </tbody> </table>	D	FC	L	W	5.5'	25.9	6.2	6.2	7'	16	8	8	8'	12.3	9.2	9.2	9'	9.7	10.2	10.4	10'	7.8	11.4	11.4	12'	5.4	13.8	13.8	<p>CANDELA TABLE</p> <table border="1"> <thead> <tr> <th>Degrees Vertical</th> <th>Candela</th> </tr> </thead> <tbody> <tr><td>0</td><td>692</td></tr> <tr><td>5</td><td>704</td></tr> <tr><td>15</td><td>811</td></tr> <tr><td>25</td><td>956</td></tr> <tr><td>35</td><td>317</td></tr> <tr><td>45</td><td>140</td></tr> <tr><td>55</td><td>70</td></tr> <tr><td>65</td><td>44</td></tr> <tr><td>75</td><td>23</td></tr> <tr><td>85</td><td>7</td></tr> <tr><td>90</td><td>0</td></tr> </tbody> </table>	Degrees Vertical	Candela	0	692	5	704	15	811	25	956	35	317	45	140	55	70	65	44	75	23	85	7	90	0	<p>ZONAL LUMEN SUMMARY</p> <table border="1"> <thead> <tr> <th>Zone</th> <th>Lumens</th> <th>%Fixture</th> </tr> </thead> <tbody> <tr><td>0-30</td><td>640</td><td>59.3</td></tr> <tr><td>0-40</td><td>843</td><td>78.1</td></tr> <tr><td>0-60</td><td>1003</td><td>92.9</td></tr> <tr><td>0-90</td><td>1079</td><td>100</td></tr> <tr><td>90-180</td><td>0</td><td>0</td></tr> <tr><td>0-180</td><td>1079</td><td>100</td></tr> </tbody> </table>	Zone	Lumens	%Fixture	0-30	640	59.3	0-40	843	78.1	0-60	1003	92.9	0-90	1079	100	90-180	0	0	0-180	1079	100
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COEFFICIENTS OF UTILIZATION

Ceiling Wall % RCR	80%				70%				50%	
	70	50	30	10	50	30	10	50	10	
Zonal cavity method -- floor reflectance = 20%										
0	119	119	119	119	116	116	116	111	111	
1	112	108	105	103	106	103	101	102	98	
2	105	99	94	90	97	93	89	94	87	
3	98	91	85	80	89	84	79	86	78	
4	92	83	77	72	82	76	71	80	70	
5	87	77	70	65	76	69	65	74	64	
6	82	71	64	59	70	64	59	69	59	
7	77	66	59	55	66	59	54	64	54	
8	73	62	55	50	61	55	50	60	50	
9	69	58	51	47	57	51	47	56	46	
10	65	54	48	43	54	48	43	53	43	


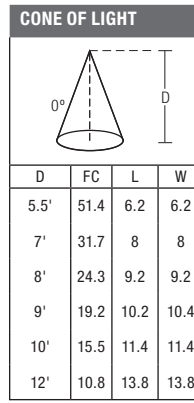
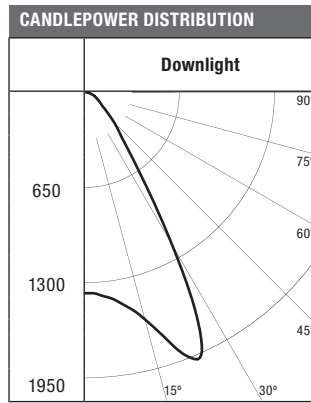
<p>Test Number P168740 Platform PN4LED 20V8301ELTE Element E4DCMW Lumens 1505 Efficacy 64.9 Lm/W SC 1.19</p> 	<p>CANDLEPOWER DISTRIBUTION</p> <p>Downlight</p> 	<p>CONE OF LIGHT</p>  <table border="1"> <thead> <tr> <th>D</th> <th>FC</th> <th>L</th> <th>W</th> </tr> </thead> <tbody> <tr><td>5.5'</td><td>36.2</td><td>6.2</td><td>6.2</td></tr> <tr><td>7'</td><td>22.3</td><td>8</td><td>8</td></tr> <tr><td>8'</td><td>17.1</td><td>9.2</td><td>9.2</td></tr> <tr><td>9'</td><td>13.5</td><td>10.2</td><td>10.4</td></tr> <tr><td>10'</td><td>10.9</td><td>11.4</td><td>11.4</td></tr> <tr><td>12'</td><td>7.6</td><td>13.8</td><td>13.8</td></tr> </tbody> </table>	D	FC	L	W	5.5'	36.2	6.2	6.2	7'	22.3	8	8	8'	17.1	9.2	9.2	9'	13.5	10.2	10.4	10'	10.9	11.4	11.4	12'	7.6	13.8	13.8	<p>CANDELA TABLE</p> <table border="1"> <thead> <tr> <th>Degrees Vertical</th> <th>Candela</th> </tr> </thead> <tbody> <tr><td>0</td><td>965</td></tr> <tr><td>5</td><td>982</td></tr> <tr><td>15</td><td>1131</td></tr> <tr><td>25</td><td>1334</td></tr> <tr><td>35</td><td>442</td></tr> <tr><td>45</td><td>196</td></tr> <tr><td>55</td><td>97</td></tr> <tr><td>65</td><td>62</td></tr> <tr><td>75</td><td>32</td></tr> <tr><td>85</td><td>9</td></tr> <tr><td>90</td><td>0</td></tr> </tbody> </table>	Degrees Vertical	Candela	0	965	5	982	15	1131	25	1334	35	442	45	196	55	97	65	62	75	32	85	9	90	0	<p>ZONAL LUMEN SUMMARY</p> <table border="1"> <thead> <tr> <th>Zone</th> <th>Lumens</th> <th>%Fixture</th> </tr> </thead> <tbody> <tr><td>0-30</td><td>893</td><td>59.3</td></tr> <tr><td>0-40</td><td>1176</td><td>78.1</td></tr> <tr><td>0-60</td><td>1399</td><td>92.9</td></tr> <tr><td>0-90</td><td>1505</td><td>100</td></tr> <tr><td>90-180</td><td>0</td><td>0</td></tr> <tr><td>0-180</td><td>1505</td><td>100</td></tr> </tbody> </table>	Zone	Lumens	%Fixture	0-30	893	59.3	0-40	1176	78.1	0-60	1399	92.9	0-90	1505	100	90-180	0	0	0-180	1505	100
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COEFFICIENTS OF UTILIZATION

Ceiling Wall % RCR	80%				70%				50%	
	70	50	30	10	50	30	10	50	10	
Zonal cavity method -- floor reflectance = 20%										
0	119	119	119	119	116	116	116	111	111	
1	112	108	105	103	106	103	101	102	98	
2	105	99	94	90	97	93	89	94	87	
3	98	91	85	80	89	84	79	86	78	
4	92	83	77	72	82	76	71	80	70	
5	87	77	70	65	76	69	65	74	64	
6	82	71	64	59	70	64	59	69	59	
7	77	66	59	55	66	59	54	64	54	
8	73	62	55	50	61	55	50	60	50	
9	69	58	51	47	57	51	47	56	46	
10	65	54	48	43	54	48	43	53	43	

PHOTOMETRICS

Test Number	P168132
Platform	PN4LED 33V8301ELTE
Element	E4DCMW
Lumens	2138
Efficacy	58.3 Lm/W
SC	1.19

CANDELA TABLE

Degrees Vertical	Candela
0	1371
5	1394
15	1606
25	1893
35	628
45	278
55	138
65	88
75	46
85	13
90	0


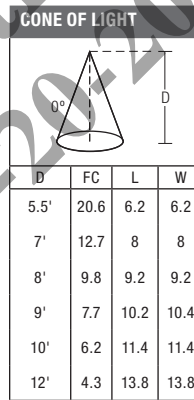
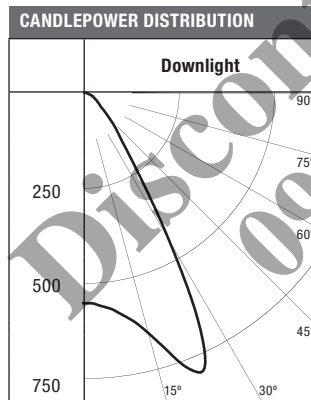
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	1268	59.3
0-40	1670	78.1
0-60	1987	92.9
0-90	2138	100
90-180	0	0
0-180	2138	100

COEFFICIENTS OF UTILIZATION

Ceiling Wall % RCR	80%				70%				50%	
	70	50	30	10	50	30	10	50	10	
Zonal cavity method -- floor reflectance = 20%										
0	119	119	119	119	116	116	116	111	111	
1	112	108	105	103	106	103	101	102	98	
2	105	99	94	90	97	93	89	94	87	
3	98	91	85	80	89	84	79	86	78	
4	92	83	77	72	82	76	71	80	70	
5	87	77	70	65	76	69	65	74	64	
6	82	71	64	59	70	64	59	69	59	
7	77	66	59	55	66	59	54	64	54	
8	73	62	55	50	61	55	50	60	50	
9	69	58	51	47	57	51	47	56	46	
10	65	54	48	43	54	48	43	53	43	

Test Number	P169329
Platform	PN4LED 15V9301ELTE
Element	E4DCMW
Lumens	859
Efficacy	52.7 Lm/W
SC	1.19

CANDELA TABLE

Degrees Vertical	Candela
0	551
5	560
15	646
25	761
35	252
45	112
55	55
65	35
75	18
85	5
90	0

ZONAL LUMEN SUMMARY


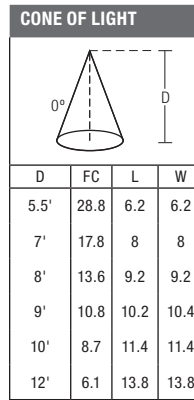
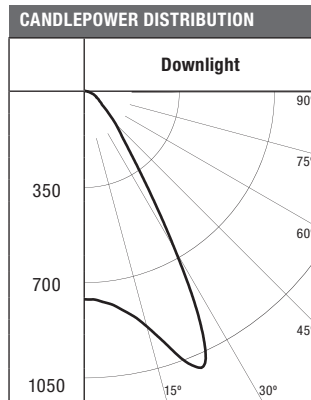
Zone	Lumens	%Fixture
0-30	510	59.3
0-40	672	78.1
0-60	799	92.9
0-90	860	100
90-180	0	0
0-180	860	100

COEFFICIENTS OF UTILIZATION

Ceiling Wall % RCR	80%				70%				50%	
	70	50	30	10	50	30	10	50	10	
Zonal cavity method -- floor reflectance = 20%										
0	119	119	119	119	116	116	116	111	111	
1	112	108	105	103	106	103	101	102	98	
2	105	99	94	90	97	93	89	94	87	
3	98	91	85	80	89	84	79	86	78	
4	92	83	77	72	82	76	71	80	70	
5	87	77	70	65	76	69	65	74	64	
6	82	71	64	59	70	64	59	69	59	
7	77	66	59	55	66	59	54	64	54	
8	73	62	55	50	61	55	50	60	50	
9	69	58	51	47	57	51	47	56	46	
10	65	54	48	43	54	48	43	53	43	

PHOTOMETRICS

Test Number	P168744
Platform	PN4LED 20V9301ELTE
Element	E4DCMW
Lumens	1199
Efficacy	51.7 Lm/W
SC	1.19

CANDELA TABLE

Degrees Vertical	Candela
0	769
5	782
15	901
25	1062
35	352
45	156
55	77
65	49
75	26
85	8
90	0


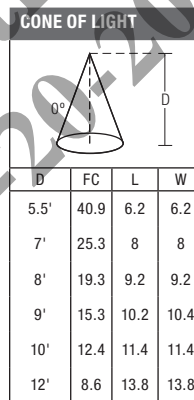
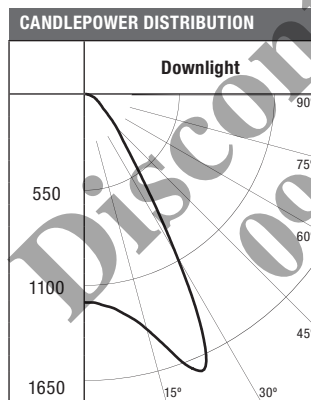
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	711	59.3
0-40	937	78.1
0-60	1114	92.9
0-90	1199	100
90-180	0	0
0-180	1199	100

COEFFICIENTS OF UTILIZATION

Ceiling Wall % RCR	80%				70%				50%	
	70	50	30	10	50	30	10	50	10	
Zonal cavity method -- floor reflectance = 20%										
0	119	119	119	119	116	116	116	111	111	
1	112	108	105	103	106	103	101	102	98	
2	105	99	94	90	97	93	89	94	87	
3	98	91	85	80	89	84	79	86	78	
4	92	83	77	72	82	76	71	80	70	
5	87	77	70	65	76	69	65	74	64	
6	82	71	64	59	70	64	59	69	59	
7	77	66	59	55	66	59	54	64	54	
8	73	62	55	50	61	55	50	60	50	
9	69	58	51	47	57	51	47	56	46	
10	65	54	48	43	54	48	43	53	43	

Test Number	P168136
Platform	PN4LED 33V9301ELTE
Element	E4DCMW
Lumens	1703
Efficacy	46.4 Lm/W
SC	1.19

CANDELA TABLE

Degrees Vertical	Candela
0	1092
5	1110
15	1279
25	1508
35	500
45	221
55	110
65	70
75	37
85	11
90	0

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	1010	59.3
0-40	1330	78.1
0-60	1582	92.9
0-90	1703	100
90-180	0	0
0-180	1703	100

COEFFICIENTS OF UTILIZATION

Ceiling Wall % RCR	80%				70%				50%	
	70	50	30	10	50	30	10	50	10	
Zonal cavity method -- floor reflectance = 20%										
0	119	119	119	119	116	116	116	111	111	
1	112	108	105	103	106	103	101	102	98	
2	105	99	94	90	97	93	89	94	87	
3	98	91	85	80	89	84	79	86	78	
4	92	83	77	72	82	76	71	80	70	
5	87	77	70	65	76	69	65	74	64	
6	82	71	64	59	70	64	59	69	59	
7	77	66	59	55	66	59	54	64	54	
8	73	62	55	50	61	55	50	60	50	
9	69	58	51	47	57	51	47	56	46	
10	65	54	48	43	54	48	43	53	43	