



D4

Architektur

4 INCH DOWNLIGHTS

 prescolite



# Architektūr D4



We don't design with light; we design with the effects of light.  
Neither should lighting design be about the luminaire,  
but rather what the luminaire can achieve.

## Introducing the Prescolite D4...

a family of small aperture downlights incorporating patented Virtual Source Lighting® optical technology and a revolutionary approach to wall washing. The result is one of the most visually subtle downlights available.

Shhh... Why shout when you can whisper?



ABOVE & BEYOND

# Architektür D4

## FEATURES

Above and below the ceiling, D4 combines practical insight, value added options, and exceptional optical control. When your lighting design requires the best of all three, D4 meets the need.



### VIRTUAL SOURCE LIGHTING® OPTICS

Prescolite's patented Virtual Source Lighting® optical technology is a signature feature of Prescolite's vertically lamped Architektür downlights. Virtual Source provides equal cut-off to lamp and lamp image at a nominal 45° viewing angle in all lateral planes. See page 4 for more details.



### VIRTUWALL SOURCE™ WALL WASH OPTICS

VirtuWall Source™ is a new, patent-pending approach to wall washing that delivers a more uniform distribution of light onto vertical surfaces than any other small aperture wallwash downlight available. See page 5 for more details.



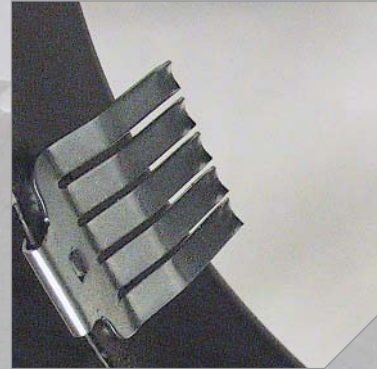
### PLASTER FRAME

Large 14 3/8" x 11 3/4" plaster frame provides superior housing stability in the ceiling.



**TOP LAMP ACCESS**

CFL, MR16, and PAR16 lamps can be replaced from above the ceiling via the tool-less top access feature, thereby avoiding the need for a scissor lift, boom, or A-frame ladder when below-ceiling access is difficult.



**TRIM RETENTION:  
5-FINGER GRIP CLIP**

D4 trim retention is provided via the Prescolite 5-finger grip clip for solid and dependable trim retention. Grip clips provide 30 individual points of contact onto the reflector's surface to ensure a snug fit into the ceiling.



**TWIST-LOCK SOCKET POSITIONING**

New patent-pending tool-less design allows easy positioning of the socket on the reflector. Socket can be placed in multiple positions to accommodate varying lamp lengths while maintaining precise optical control.



**JUNCTION BOX ACCESS**

D4 features a unique 15° angled and elevated junction box to provide the best visibility of the ballast/transformer and wiring compartment from below the ceiling for easier wiring and ballast/transformer replacement.

# ON THE 4FRONT

At Prescolite, innovation and refinement are part of our heritage. D4 downlights continue this tradition by combining our signature Virtual Source Lighting® optical design with VirtuWall Source™, a revolutionary new approach to wall washing. Take a closer look at the design and function of these compelling features that make D4 the optimal balance of performance, styling, and efficiency.

## VirtualSource® OPTICS

Virtual Source Lighting® optics, Prescolite's patented optical design, provides symmetrical cutoff, symmetrical distribution, excellent performance, and an appearance that is unmatched in the industry.

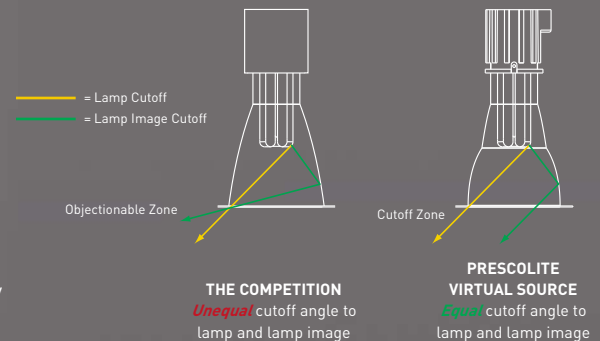
Prescolite's optical designer deviated from the standard design and engineered a "transition line" that separates the upper and lower portions of the reflector. As a result, the cut-off is derived from the transition line, not the lamps. The active upper reflector section is called the Virtual Source, or "glowy top." The effect emulates a round glowing shape, similar to a BR-lamp. The lower section is intentionally designed to be inactive until the viewer is able to distinguish the active top section as a distinct optical element.

### THE RESULT: SYMMETRICAL CUTOFF

Virtual Source Lighting® downlights will have the same cutoff angle in all lateral planes because the transition line in the reflector defines the cutoff angle. Symmetrical cutoff will yield downlights with the same appearance regardless of how the viewer approaches the downlight, whether the lamp is vertically or horizontally mounted.

### EFFICIENCY

Typically, downlights derive a significant amount of their efficiency above the 40° zone, resulting in direct glare. Prescolite's Virtual Source Lighting® optics deliver most of their light in the 0°-40° zone, which results in more task illumination where you need it and downlights that are both efficient and effective.

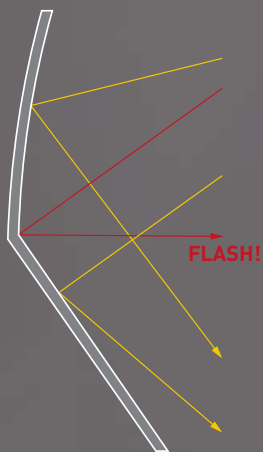


- 1 TWIST-LOCK SOCKET POSITIONING\***  
Choose from a wide variety of lamps, and know that whichever one you choose, it will be plumb and properly positioned in the reflector.
- 2 UPPER WALL WASH REFLECTOR**  
Light is directed uniformly across the lower portion of the wall.
- 3 LOWER WALL WASH REFLECTOR**  
Light is directed uniformly across the upper portion of the wall.
- 4 ROOM SIDE DOWNLIGHT REFLECTOR**  
This reflector profile controls light with Prescolite's patented Virtual Source® optics for superior brightness and glare control.
- 5 LEAF SPRING WALL WASH TRIM RETENTION**  
Wall wash reflectors are retained by leaf springs integral to the trim, allowing easy push-in installation and 360° rotation.

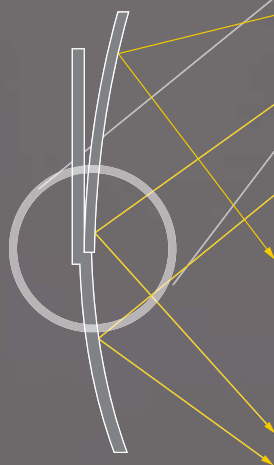


**VirtuWallSource™**  
ARCHITECTURAL WALL WASH OPTICS

With the D4 wall wash, the focus is the wall. The D4's patent-pending VirtuWall Source™ wall wash optics combine Virtual Source Lighting® optics with precision-engineered lower and upper reflectors that direct light over a greater lateral distance compared to common wall washers that employ a "kicker".



**CLOSEUP OF A TYPICAL 2-TOOL 360° WALL WASH REFLECTOR**  
Crease formed during production causes uncontrolled rays at crease and results in flash.



**CLOSEUP OF VIRTUWALL SOURCE™ WALL WASH REFLECTOR**  
All surfaces are controlled. Light rays exit reflector uniformly and flash is prevented.

Wall wash kicker reflectors are usually produced by hydro-forming. The "kicker" is then punched and tends to spring back into an arch that is different than what was originally engineered producing inconsistent light (hot spots) and glare (flash). Prescolite VirtuWall Source™ performs as designed because the reflector is unaltered after forming.

VirtuWall Source™ optics ensure uniform light distribution by effectively positioning the upper reflector relative to the lower wall side reflector. This produces uniform output throughout the transition from upper to lower wall wash components.

The room side of the VirtuWall Source™ reflector utilizes Virtual Source Lighting® optics, producing excellent brightness and glare control.

\*Patent Pending

Architektür D4

# TRIMS

The D4 is designed with versatility in mind, and trim options are no exception. A wide variety of finishes and colors complement the performance and visual balance of this exceptional 4 inch downlight.



**REFLECTOR  
FINISH**

**REFLECTOR  
COLOR**



SPECULAR



SEMI-SPECULAR



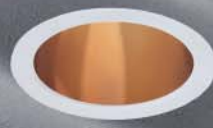
AMERICAN  
MATTE™



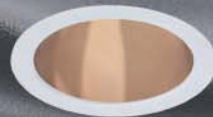
CLEAR  
ALZAK



CHAMPAGNE  
GOLD ALZAK



WHEAT  
ALZAK



LIGHT WHEAT  
ALZAK



PEWTER  
ALZAK



BLACK  
ALZAK



BLACK  
BAFFLE



WHITE  
BAFFLE

# CATALOG LOGIC

## SPECIFICATION INFORMATION

ORDERING EXAMPLE: D432EB  
4D5MFC LW

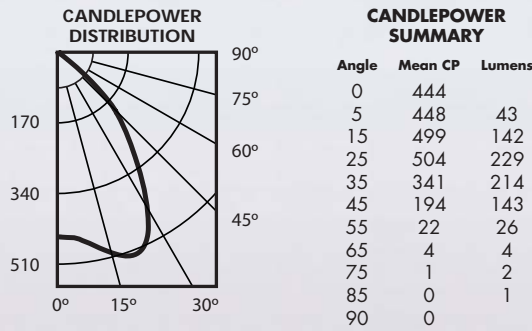
HOUSING		TRIM			ACCESSORIES			
D4	32	EB	4D5	MFC	LW			
<b>HOUSING MODEL</b> <b>D4</b> 4" downlight		<b>BALLAST</b> <b>BLANK</b> No ballast (Incandescent) <b>EB</b> Electronic Ballast	<b>DIMMING OPTIONS</b> <b>DM</b> <sup>6</sup> Analog Dimming to 3%, 4-wire (120V-277V) <b>SDM</b> <sup>1,5,6</sup> Lutron Compact SE™ Dimming to 5%, 3-wire Specify 120V or 277V <b>HDM</b> <sup>1,2,5,6</sup> Lutron Hi-Lume® Dimming to 1%, 3-wire Specify 120V or 277V <b>2DM</b> <sup>1,2,5,6</sup> Lutron Tu-Wire® Dimming to 5%, 2-wire (120V only) <b>7DM</b> <sup>6</sup> Advance Mark 7™ Dimming to 3%, 4-wire (120V-277V) <b>XDM</b> <sup>1,6</sup> Advance Mark 10™ Dimming to 5%, 2-wire Specify 120V or 277V	<b>TRIM</b> <b>4D4</b> Open Alzak Reflector (13W or 18W Triple Tube Lamp only) <b>4D5</b> Open Alzak Reflector (13W or 18W Quad or 26W or 32W Triple Tube Lamp only) <b>4D2</b> Open Alzak Reflector (A19 lamp only) <b>4DB2</b> <sup>8</sup> Open Baffle (A19 lamp only) <b>4D1</b> Open Alzak Reflector (Reflector lamps only) <b>4DB1</b> <sup>8</sup> Open Baffle (Reflector lamps only)	<b>REFLECTOR COLOR</b> <b>Blank</b> Clear Alzak <b>CG</b> Champagne Gold Alzak <b>WE</b> Wheat Alzak <b>LW</b> Light Wheat Alzak <b>PW</b> Pewter Alzak <b>BL</b> <sup>7</sup> Black Alzak (4D4/4D5/4D1/4D2) Black Paint (4DB2/4DB1) <b>WH</b> White Paint (4DB2/4DB1)	<b>REFLECTOR OPTIONS</b> <b>WW</b> (4D4/4D5/4D2 only) VirtuWall Source™ Wall Wash <b>TRG</b> Trim Ring gasket <b>WT</b> Painted white self flange <b>MW75A19</b> (4D2/4DB2 only) Max Wattage Label, 75W A19	<b>ACCESSORIES</b> <b>B24</b> Set of two (2) 24" bar hangers for T-bar ceilings <b>B6</b> Set of two (2) bar hangers for ceiling joists up to 24" centers <b>FSDFI</b> Fuse Kit for field installation <b>SCA5</b> Sloped ceiling adaptor <b>2MLH</b> Two media lamp holder for MR16 housings	<b>ACCESSORIES</b> <b>LV10</b> MR16 linear spread lens <b>LV17</b> MR16 diffusion lens <b>LV18</b> MR16 hexcel louver <b>LV19</b> MR16 softening lens <b>LV701</b> MR16 UV filter <b>COLOR FILTERS</b> <b>LV711</b> MR16 pink lens <b>LV721</b> MR16 red lens <b>LV731</b> MR16 light blue lens <b>LV741</b> MR16 blue lens <b>LV751</b> MR16 amber lens <b>LV761</b> MR16 green lens
<b>LAMP/WATTAGE</b> <b>13</b> (1) Vertical 13W Quad or Triple Tube CFL (120V-277V) <b>18</b> (1) Vertical 18W Quad or Triple Tube CFL (120V-277V) <b>32</b> (1) Vertical 26W or 32W Triple Tube CFL (120V-277V) <b>MED</b> (1) Vertical A19 (100W max) PAR20 (50 W max) PAR16 (75W max) R20 (100W max) <b>MR</b> <sup>10</sup> (1) Vertical MR16 (75W max) <b>AR70</b> (1) Vertical AR70 (50W max) <b>MHP2039</b> (1) Vertical MH PAR20 (39W) <b>MHP2020</b> (1) Vertical MH PAR20 (20W)		<b>VOLTAGE</b> <b>120V</b> <sup>11</sup> <b>277V</b> <sup>11</sup>	<b>HOUSING OPTIONS</b> <b>EM</b> <sup>3,4,6</sup> Emergency Battery Pack <b>FSDFA</b> Fuse Kit Factory Installed <b>RIF1</b> <sup>4,6</sup> Radio Interference Filter (1 Circuit) <b>347V</b> <sup>3,6</sup> 347V ballast <b>277V</b> <sup>12</sup> J-box mounted step-down transformer <b>MW35MR</b> <sup>9</sup> Max Wattage Label, 35W MR16	<b>REFLECTOR FINISH</b> <b>BLANK</b> Specular <b>SS</b> Semi-Specular <b>MFC</b> American Matte™				

- <sup>1</sup> Not available with 13W CFL lamp
- <sup>2</sup> Not available with 18W CFL lamp
- <sup>3</sup> 347V not available with EM or dimming options
- <sup>4</sup> RIF1 and EM options not offered in combination
- <sup>5</sup> For 26W CFL lamp specify D426EB and add desired Lutron dimming option suffix
- <sup>6</sup> Available with D413, D418, D432 only
- <sup>7</sup> 75W max. on 4D2BL and 4DB2BL
- <sup>8</sup> Specify black (BL) or white (WH) color only. Upper reflector with clear Alzak finish
- <sup>9</sup> See product specification sheet for variations of Max Wattage Labels specific to the housings
- <sup>10</sup> Protected lamp required
- <sup>11</sup> Specify with D4MHP2039 and D4MHP2020 only
- <sup>12</sup> Specify with D4MR, D4MED, and D4AR70 only

## PERFORMANCE

### D4MED-4D2 Specular Clear Alzak Reflector

Lamp: One 100W A-19 Inside Frosted  
Rated Lumens: 1710  
Spacing Criteria: 1.2  
Efficiency: 47.0%



Test No. 1010

### AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array)  
Ceiling 80% Wall 50% Floor 20%

100W A-19	SPACING		
	RCR1	RCR3	RCR7
7.0	14	12	8
8.0	11	9	6
9.0	8	7	5
10.0	7	6	4
11.0	6	5	3
12.0	5	4	3
13.0	4	3	2
14.0	3	3	2
15.0	3	3	2

### COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Floor Cavity Reflectance																				
	80%				70%				50%				30%				10%				0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	.56	.56	.56	.56	.55	.55	.55	.55	.52	.52	.52	.50	.50	.50	.48	.48	.48	.47	.47	.47	.47
1	.53	.51	.50	.49	.52	.50	.49	.48	.49	.48	.47	.47	.46	.45	.45	.45	.44	.43	.43	.43	.43
2	.50	.47	.45	.43	.49	.46	.44	.43	.45	.43	.42	.43	.42	.41	.42	.41	.40	.39	.39	.39	.39
3	.47	.43	.41	.38	.46	.43	.40	.38	.41	.39	.37	.40	.38	.37	.39	.38	.36	.35	.35	.35	.35
4	.44	.40	.37	.34	.43	.39	.36	.34	.38	.36	.34	.37	.35	.33	.36	.34	.33	.32	.32	.32	.32
5	.41	.37	.33	.31	.40	.36	.33	.31	.35	.33	.31	.34	.32	.30	.34	.32	.30	.29	.29	.29	.29
6	.39	.34	.30	.28	.38	.33	.30	.28	.33	.30	.28	.32	.29	.28	.31	.29	.27	.27	.27	.27	.27
7	.36	.31	.28	.26	.35	.31	.28	.25	.30	.27	.25	.30	.27	.25	.29	.27	.25	.24	.24	.24	.24
8	.34	.29	.26	.23	.33	.29	.25	.23	.28	.25	.23	.27	.25	.23	.27	.25	.23	.22	.22	.22	.22
9	.32	.27	.24	.21	.31	.27	.23	.21	.26	.23	.21	.26	.23	.21	.25	.23	.21	.20	.20	.20	.20
10	.30	.25	.22	.20	.30	.25	.22	.20	.24	.22	.20	.24	.21	.20	.24	.21	.20	.19	.19	.19	.19

D4MED-4D2 100W A-19 I.F.

Test No. 1010

### NOTES

Refer to www.prescolite.com for additional photometric tests (IES Files).

BALLAST DATA	18W Triple			26W Triple			32W Triple		
	120V	277V	347V	120V	277V	347V	120V	277V	347V
Total System Watts	20W	20W	21W	29W	29W	31W	36W	36W	36W
Input Current (Amps)	0.17	0.08	0.06	0.24	0.11	0.09	0.31	0.13	0.11
Input Frequency in Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Power Factor	>97%	>97%	>98%	>98%	>98%	>98%	>98%	>98%	>98%
Ballast Factor	>105%	>105%	>100%	>110%	>110%	>102%	>98%	>98%	>98%
Total Harmonic Distortion	<10%	<10%	<10%	<10%	<10%	<10%	<10%	<10%	<10%
Minimum Starting Temp	-18°C (0°F)	-18°C (0°F)	-18°C (0°F)	-18°C (0°F)	-18°C (0°F)	-18°C (0°F)	-18°C (0°F)	-18°C (0°F)	-18°C (0°F)

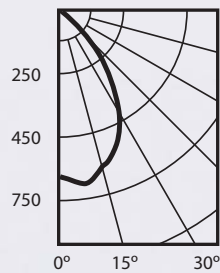
#### LAMP DATA

	18W triple	26W triple	32W triple
Rated Watts	1200	1800	2400
Rated Lumens	67	69	75
Efficacy (LPW)	10,000 hours	10,000 hours	10,000 hours
Rated Life	82	82	82
CR1	0° F	0° F	0° F
Minimum Starting Temp.			

#### D432EB-4D5 with Clear Alzak Reflector

Lamp: One 32W Triple  
Spacing Criteria: 1.1  
Efficiency: 38.6%

#### CANDLEPOWER DISTRIBUTION



Test No. 1103

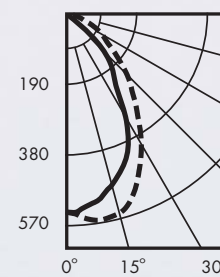
#### CANDLEPOWER SUMMARY

Angle	Mean CP	Lumens
0	656	
5	678	65
15	639	182
25	546	250
35	362	226
45	154	118
55	4	7
65	1	1
75	1	1
85	0	0
90	0	

#### D432EB-4D5WW with Clear Alzak Reflector

Lamp: One 32W Triple  
Spacing Criteria: 1.0  
Efficiency: 27.7%

#### CANDLEPOWER DISTRIBUTION



Test No. 1501

#### CANDLEPOWER SUMMARY

Angle	0°	180°
0	519	519
5	521	514
15	544	447
25	465	326
35	332	202
45	170	6
55	95	5
65	63	1
75	33	2
85	7	0
90	1	0

#### LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average 0°
45°	21218
55°	679
65°	231
75°	376
85°	0

#### AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array)  
Ceiling 80% Wall 50% Floor 20%

32W Triple	SPACING		
	RCR1	RCR3	RCR7
7.0	15	13	9
8.0	12	10	7
9.0	9	8	6
10.0	7	6	5
11.0	6	5	4
12.0	5	4	3
13.0	4	4	3
14.0	4	3	2
15.0	3	3	2

#### LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average 0°	Average 90°	Average 180°
45°	31998	11670	1129
55°	22044	2088	1160
65°	19841	945	315
75°	16970	514	1028
85°	10690	0	0

#### COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Floor Cavity Reflectance																			
	80%				70%				50%				30%				10%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
1	.44	.43	.42	.41	.43	.42	.41	.40	.40	.39	.39	.39	.38	.38	.37	.37	.36	.37	.37	.36
2	.41	.39	.38	.36	.40	.39	.37	.36	.37	.36	.35	.36	.35	.36	.35	.34	.34	.35	.34	.34
3	.39	.36	.34	.33	.38	.36	.34	.32	.35	.33	.32	.34	.32	.31	.33	.32	.31	.33	.32	.31
4	.37	.34	.31	.30	.36	.33	.31	.29	.32	.30	.29	.31	.30	.29	.31	.29	.28	.31	.29	.28
5	.35	.31	.29	.27	.34	.31	.28	.27	.30	.28	.27	.29	.28	.26	.29	.27	.26	.29	.27	.26
6	.33	.29	.26	.25	.32	.29	.26	.25	.28	.26	.24	.27	.26	.24	.27	.25	.24	.27	.25	.24
7	.31	.27	.24	.23	.30	.27	.24	.23	.26	.24	.22	.26	.24	.22	.25	.23	.22	.25	.23	.22
8	.29	.25	.23	.21	.29	.25	.22	.21	.24	.22	.21	.24	.22	.21	.24	.22	.21	.24	.22	.21
9	.28	.23	.21	.19	.27	.23	.21	.19	.23	.21	.19	.23	.21	.19	.22	.20	.19	.22	.20	.19
10	.26	.22	.20	.18	.26	.22	.20	.18	.22	.19	.18	.21	.19	.18	.21	.19	.18	.21	.19	.18

D432EB-4D5

Test No. 1103

MULTIPLE UNITS	
UNITS ON 3' CENTER	UNITS ON 4' CENTER
1'	
2'	
3'	
4'	

#### 3' DISTANCE FIXTURE MOUNTED OUT FROM WALLS FOOTCANDLE DISTRIBUTION ON WALL SURFACE

DISTANCE FROM CEILING IN FEET	MULTIPLE UNITS																			
	UNITS ON 3' CENTER				UNITS ON 4' CENTER				UNITS ON 3' CENTER				UNITS ON 4' CENTER							
1	4.5	3.5	1.7	0.7	0.3	6.2	5.8	6.2	5.2	3.7	5.2	6.2	5.8	6.2	5.2	3.7	5.2	6.2	5.8	6.2
2	5.7	4.6	2.5	1.2	0.6	8.4	8.1	8.4	6.9	5.5	6.9	8.4	8.1	8.4	6.9	5.5	6.9	8.4	8.1	8.4
3	6.9	5.5	3.0	1.5	0.6	10.4	9.5	10.4	8.3	6.5	8.3	10.4	9.5	10.4	8.3	6.5	8.3	10.4	9.5	10.4
4	7.3	6.3	4.0	1.9	0.9	11.6	11.7	11.6	9.2	8.4	9.2	11.6	11.7	11.6	9.2	8.4	9.2	11.6	11.7	11.6
5	6.1	5.6	4.1	2.6	1.2	11.9	11.6	11.9	8.7	8.7	8.7	11.9	11.6	11.9	8.7	8.7	8.7	11.9	11.6	11.9
6	4.6	4.4	3.5	2.4	1.6	10.3	10.5	10.3	8.0	7.7	8.0	10.3	10.5	10.3	8.0	7.7	8.0	10.3	10.5	10.3
7	3.4	3.3	2.7	2.1	1.5	8.9	9.1	8.9	6.8	6.7	6.8	8.9	9.1	8.9	6.8	6.7	6.8	8.9	9.1	8.9
8	2.6	2.5	2.2	1.7	1.4	7.6	7.8	7.6	5.8	5.9	5.8	7.6	7.8	7.6	5.8	5.9	5.8	7.6	7.8	7.6
9	2.0	2.0	1.8	1.5	1.2	6.5	6.7	6.5	4.9	5.0	4.9	6.5	6.7	6.5	4.9	5.0	4.9	6.5	6.7	6.5

D432EB-4D5WW

Test No. 1501

#### NOTES

Refer to [www.prescolite.com](http://www.prescolite.com) for additional photometric tests (IES Files).



701 Millennium Blvd.  
Greenville, SC 29607  
Phone: (864) 678-1000

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