

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

PRDDH12GV 55L 35K XX PR12 DR12A CNFR MW  
Nom 12 inch diam, high bay, mid bay, low bay application

### **Test Number**

SP-00456\_29

### **Test Date**

3/9/2021

The results contained in this report pertain only to this IES file.

### Summary of Results

#### Power

Input Watts	39 W
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#### Lumen Output

Output Lumens	4899
Efficacy	125.61 lm/W

#### Luminous Dimensions

0° - 180° Size	-1
90° - 270° Size	-1
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	1.15
Two luminaires, plane 90°	1.15
Four luminaires	1.09

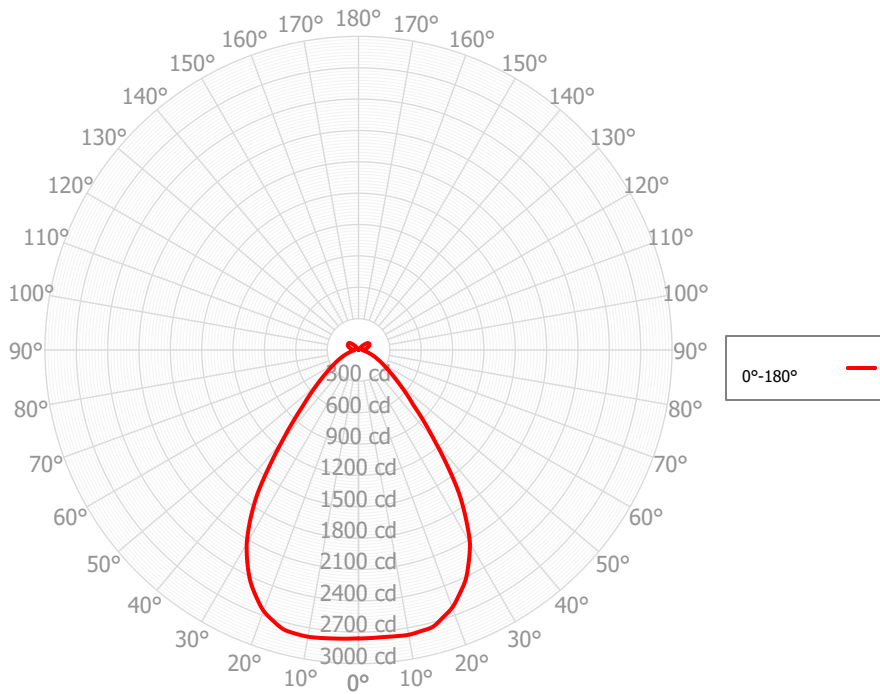
#### Full Beam Angle

0° - 180°	75°
90° - 270°	N/A°

### IES File Header Contents

Keyword	Value
TEST	SP-00456_29
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	3/9/2021
ISSUEDATE	3/19/2021
LUMCAT	PRDDH12GV 55L 35K XX PR12 DR12A CNFR MW
LUMINAIRE	Nom 12 inch diam, high bay, mid bay, low bay application
OTHER	Prismatic refractor, door with frosted conical lens
OTHER	Beam angle: 75 degrees
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multiplier: 27K x 0.97, 30K x 0.99, 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	83
_CCTMULT	27K x 0.97, 30K x 0.99, 40K x 1.03
_CCTMULTA	50K x 1.06
_LAMPMULT	15L x 0.27, 27L x 0.46, 37L x 0.68

**Candela Polar Plot**



**Zonal Lumen Summary**

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	268.43	5.48%	90.00° - 100.00°	58.40	1.19%
10.00° - 20.00°	772.22	15.76%	100.00° - 110.00°	95.89	1.96%
20.00° - 30.00°	1109.32	22.65%	100.00° - 120.00°	208.35	4.25%
30.00° - 40.00°	1027.58	20.98%	120.00° - 130.00°	100.77	2.06%
40.00° - 50.00°	595.76	12.16%	130.00° - 140.00°	56.46	1.15%
50.00° - 60.00°	337.47	6.89%	140.00° - 150.00°	13.23	0.27%
60.00° - 70.00°	195.75	4.00%	150.00° - 160.00°	1.38	0.03%
70.00° - 80.00°	102.16	2.09%	160.00° - 170.00°	0.58	0.01%
80.00° - 90.00°	50.56	1.03%	170.00° - 180.00°	0.24	0.00%
0.00° - 90.00°	4459.26	91.03%	0.00° - 180.00°	4898.68	100.00%

### Candela Distribution

	0.00°	180.00°
0.00°	2760.42	2760.42
2.50°	2758.89	2765.50
5.00°	2757.62	2770.94
7.50°	2762.22	2779.40
10.00°	2766.98	2785.98
12.50°	2755.86	2780.81
15.00°	2742.84	2767.65
17.50°	2684.43	2717.40
20.00°	2623.04	2656.51
22.50°	2526.91	2556.98
25.00°	2425.84	2446.35
27.50°	2284.92	2301.99
30.00°	2132.25	2138.87
32.50°	1912.55	1928.95
35.00°	1681.00	1691.88
37.50°	1398.19	1398.37
40.00°	1131.84	1133.59
42.50°	924.13	920.70
45.00°	740.17	745.10
47.50°	624.56	626.61
50.00°	519.22	523.38
52.50°	438.28	440.09
55.00°	366.72	369.87
57.50°	314.40	314.70
60.00°	267.22	268.37
62.50°	228.93	230.75
65.00°	194.33	196.34
67.50°	165.15	164.63
70.00°	138.60	137.56
72.50°	115.46	113.95
75.00°	95.02	94.39
77.50°	77.58	77.38
80.00°	63.22	63.87
82.50°	51.84	52.26
85.00°	43.81	44.42
87.50°	38.57	38.33
90.00°	38.31	38.48
92.50°	41.61	41.03
95.00°	51.05	51.97
97.50°	64.31	65.61
100.00°	74.53	75.15
102.50°	83.15	83.61
105.00°	90.84	91.43
107.50°	98.13	99.12
110.00°	105.61	104.95
112.50°	113.15	110.49

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	5727	5727	5727	5727	5543	5543	5543	5543	5199	5199	5199	4884	4884	4884	4595	4595	4459
	<b>1</b>	5348	5167	5005	4858	5177	5016	4871	4739	4733	4618	4512	4473	4383	4299	4234	4164	4099
	<b>2</b>	4979	4666	4406	4189	4821	4540	4305	4107	4304	4113	3948	4086	3932	3797	3885	3762	3653
	<b>3</b>	4637	4230	3915	3664	4491	4124	3837	3605	3925	3686	3490	3741	3544	3378	3571	3409	3271
	<b>4</b>	4323	3852	3507	3244	4189	3763	3445	3200	3594	3325	3113	3437	3211	3028	3291	3102	2946
	<b>5</b>	4037	3524	3165	2900	3915	3447	3115	2866	3303	3017	2798	3168	2924	2732	3042	2835	2668
	<b>6</b>	3777	3237	2874	2614	3666	3171	2833	2587	3046	2752	2533	2930	2675	2480	2821	2601	2429
	<b>7</b>	3541	2985	2625	2373	3440	2928	2590	2351	2820	2523	2307	2718	2458	2264	2623	2396	2222
	<b>8</b>	3327	2764	2410	2166	3234	2714	2380	2148	2619	2323	2112	2530	2268	2077	2447	2215	2041
	<b>9</b>	3132	2568	2222	1989	3048	2524	2197	1973	2441	2148	1943	2362	2101	1913	2288	2055	1884
	<b>10</b>	2956	2394	2058	1834	2878	2355	2036	1821	2282	1994	1795	2212	1953	1770	2146	1913	1745

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	91.3 fc	4.2 ft
6.5 ft	65.3 fc	5.0 ft
7.5 ft	49.1 fc	5.8 ft
8.0 ft	43.1 fc	6.1 ft
10.0 ft	27.6 fc	7.7 ft
12.0 ft	19.2 fc	9.2 ft
14.0 ft	14.1 fc	10.8 ft
16.0 ft	10.8 fc	12.3 ft
20.0 ft	6.9 fc	15.4 ft
24.0 ft	4.8 fc	18.4 ft
28.0 ft	3.5 fc	21.5 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	37832	37832	37832
<b>45.00°</b>	14346	14370	14394
<b>55.00°</b>	8762	8781	8800
<b>65.00°</b>	6302	6318	6335
<b>75.00°</b>	5032	5023	5015
<b>85.00°</b>	6888	6912	6937

### UGR CIE 190:2010

<b>Ceiling reflectance</b>		<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>Wall reflectance</b>		<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>Plane reflectance</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>		<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>2H</b>	<b>2H</b>	15.3	16.5	15.8	17.0	17.5	15.3	16.5	15.8	17.0	17.5
	<b>3H</b>	16.5	17.5	17.0	18.0	18.6	16.5	17.5	17.0	18.0	18.6
	<b>4H</b>	16.9	17.9	17.5	18.4	19.0	16.9	17.9	17.5	18.4	19.0
	<b>6H</b>	17.3	18.2	17.9	18.7	19.3	17.3	18.2	17.9	18.7	19.3
	<b>8H</b>	17.5	18.3	18.0	18.8	19.5	17.5	18.3	18.0	18.8	19.5
	<b>12H</b>	17.6	18.4	18.2	19.0	19.6	17.6	18.4	18.2	19.0	19.6
<b>4H</b>	<b>2H</b>	15.7	16.6	16.2	17.1	17.7	15.7	16.6	16.2	17.2	17.8
	<b>3H</b>	17.1	17.8	17.6	18.4	19.0	17.0	17.8	17.6	18.4	19.0
	<b>4H</b>	17.6	18.3	18.2	18.9	19.5	17.6	18.3	18.2	18.9	19.5
	<b>6H</b>	18.1	18.7	18.7	19.3	20.0	18.1	18.7	18.7	19.3	20.0
	<b>8H</b>	18.3	18.9	19.0	19.5	20.2	18.3	18.9	19.0	19.5	20.2
	<b>12H</b>	18.6	19.1	19.3	19.8	20.4	18.6	19.1	19.3	19.8	20.4
<b>8H</b>	<b>4H</b>	17.8	18.4	18.4	19.0	19.6	17.8	18.3	18.4	18.9	19.6
	<b>6H</b>	18.4	18.9	19.1	19.6	20.2	18.4	18.9	19.1	19.5	20.2
	<b>8H</b>	18.8	19.2	19.4	19.9	20.6	18.8	19.2	19.4	19.9	20.6
	<b>12H</b>	19.2	19.6	19.9	20.2	21.0	19.2	19.6	19.9	20.2	21.0
<b>12H</b>	<b>4H</b>	17.8	18.3	18.4	18.9	19.6	17.8	18.3	18.4	18.9	19.6
	<b>6H</b>	18.5	18.9	19.2	19.5	20.3	18.5	18.9	19.2	19.5	20.3
	<b>8H</b>	18.9	19.3	19.6	19.9	20.7	18.9	19.3	19.6	19.9	20.7

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0