

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

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

### Test Number

SP-00456\_33

### 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	4578
Efficacy	117.38 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.76
Two luminaires, plane 90°	0.76
Four luminaires	0.78

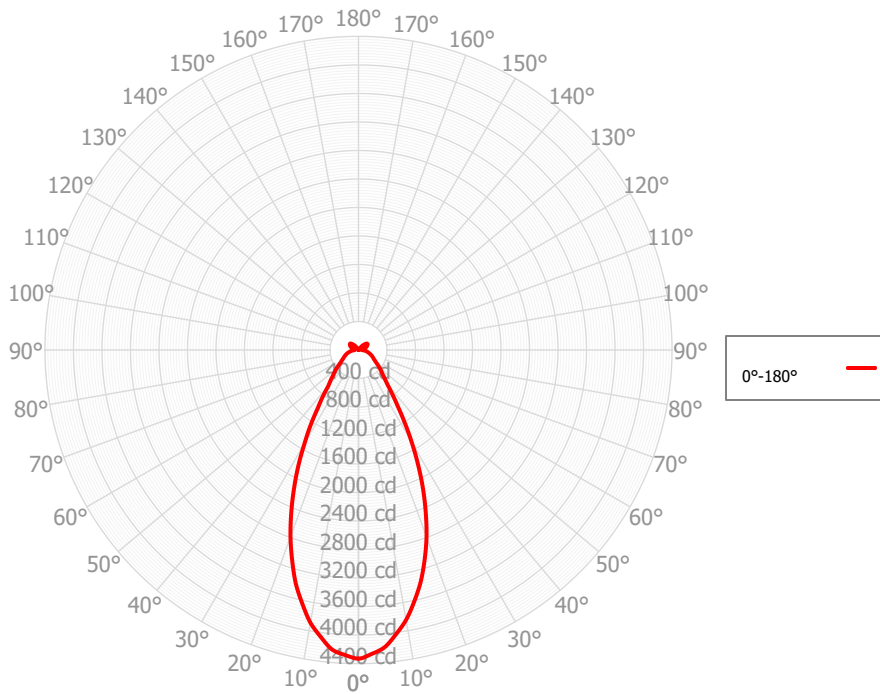
#### Full Beam Angle

0° - 180°	50°
90° - 270°	N/A°

### IES File Header Contents

Keyword	Value
TEST	SP-00456_33
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 PP MW
LUMINAIRE	Nom 12 inch diam, high bay, mid bay, low bay application
OTHER	Prismatic refractor, door with prismatic polycarbonate lens
OTHER	Beam angle: 50 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°	394.83	8.62%	90.00° - 100.00°	63.67	1.39%
10.00° - 20.00°	933.22	20.38%	100.00° - 110.00°	99.39	2.17%
20.00° - 30.00°	970.05	21.19%	100.00° - 120.00°	225.88	4.93%
30.00° - 40.00°	627.21	13.70%	120.00° - 130.00°	131.06	2.86%
40.00° - 50.00°	386.49	8.44%	130.00° - 140.00°	83.32	1.82%
50.00° - 60.00°	277.41	6.06%	140.00° - 150.00°	20.11	0.44%
60.00° - 70.00°	214.17	4.68%	150.00° - 160.00°	1.34	0.03%
70.00° - 80.00°	159.09	3.48%	160.00° - 170.00°	0.77	0.02%
80.00° - 90.00°	89.14	1.95%	170.00° - 180.00°	0.23	0.01%
0.00° - 90.00°	4051.61	88.50%	0.00° - 180.00°	4577.99	100.00%

### Candela Distribution

	0.00°	180.00°
0.00°	4331.12	4331.12
2.50°	4269.49	4285.89
5.00°	4189.29	4222.13
7.50°	4025.30	4061.04
10.00°	3846.95	3887.40
12.50°	3615.10	3645.66
15.00°	3370.54	3397.66
17.50°	3086.85	3095.60
20.00°	2791.40	2790.66
22.50°	2465.50	2464.82
25.00°	2138.10	2138.70
27.50°	1807.31	1825.01
30.00°	1491.19	1513.52
32.50°	1203.26	1251.08
35.00°	955.59	995.45
37.50°	774.78	822.05
40.00°	631.99	659.01
42.50°	544.84	579.60
45.00°	475.89	504.15
47.50°	430.17	452.95
50.00°	384.03	401.96
52.50°	337.41	351.94
55.00°	299.23	306.63
57.50°	269.41	279.33
60.00°	246.71	254.16
62.50°	230.25	235.85
65.00°	213.29	218.37
67.50°	195.94	203.11
70.00°	179.23	187.47
72.50°	162.94	170.96
75.00°	147.23	154.19
77.50°	131.86	136.88
80.00°	116.44	119.91
82.50°	101.00	103.52
85.00°	79.85	84.72
87.50°	56.22	62.27
90.00°	48.51	49.24
92.50°	46.76	48.64
95.00°	56.69	53.60
97.50°	70.28	65.05
100.00°	80.09	74.77
102.50°	88.90	82.71
105.00°	97.13	90.96
107.50°	105.24	99.49
110.00°	113.91	108.26
112.50°	122.68	117.24

### 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>	5325	5325	5325	5325	5140	5140	5140	5140	4794	4794	4794	4478	4478	4478	4188	4188	4052
	<b>1</b>	4954	4777	4620	4477	4781	4625	4484	4356	4339	4227	4125	4076	3989	3908	3834	3767	3644
	<b>2</b>	4616	4320	4075	3869	4457	4193	3971	3784	3953	3774	3620	3732	3589	3463	3528	3415	3306
	<b>3</b>	4313	3935	3643	3410	4167	3828	3562	3347	3626	3406	3225	3439	3259	3108	3265	3119	3023
	<b>4</b>	4040	3608	3292	3051	3907	3517	3227	3003	3345	3102	2910	3186	2983	2819	3037	2870	2784
	<b>5</b>	3794	3328	3002	2761	3673	3250	2949	2724	3103	2847	2650	2966	2749	2578	2838	2655	2579
	<b>6</b>	3571	3084	2757	2522	3461	3017	2713	2492	2890	2628	2433	2772	2547	2375	2660	2468	2401
	<b>7</b>	3370	2871	2548	2321	3270	2813	2511	2297	2703	2440	2248	2599	2371	2200	2502	2305	2244
	<b>8</b>	3187	2684	2367	2150	3096	2633	2336	2129	2537	2275	2089	2446	2217	2049	2360	2160	2106
	<b>9</b>	3021	2518	2210	2002	2938	2473	2183	1984	2388	2131	1950	2308	2080	1916	2232	2031	1983
	<b>10</b>	2869	2370	2071	1872	2794	2331	2048	1857	2255	2002	1828	2184	1958	1799	2116	1915	1872

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	143.2 fc	2.5 ft
6.5 ft	102.5 fc	3.0 ft
7.5 ft	77.0 fc	3.5 ft
8.0 ft	67.7 fc	3.7 ft
10.0 ft	43.3 fc	4.6 ft
12.0 ft	30.1 fc	5.5 ft
14.0 ft	22.1 fc	6.5 ft
16.0 ft	16.9 fc	7.4 ft
20.0 ft	10.8 fc	9.2 ft
24.0 ft	7.5 fc	11.1 ft
28.0 ft	5.5 fc	12.9 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	59358	59358	59358
<b>45.00°</b>	9224	9361	9497
<b>55.00°</b>	7150	7194	7238
<b>65.00°</b>	6917	6958	6999
<b>75.00°</b>	7796	7888	7980
<b>85.00°</b>	12556	12747	12939

### 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>	14.4	15.5	15.0	16.1	16.7	14.6	15.7	15.1	16.2	16.8
	<b>3H</b>	16.6	17.6	17.2	18.1	18.8	16.7	17.7	17.3	18.3	18.9
	<b>4H</b>	17.6	18.5	18.2	19.1	19.7	17.7	18.7	18.3	19.2	19.9
	<b>6H</b>	18.6	19.5	19.2	20.0	20.7	18.7	19.6	19.3	20.2	20.8
	<b>8H</b>	19.1	19.9	19.7	20.5	21.2	19.2	20.0	19.8	20.6	21.3
	<b>12H</b>	19.5	20.3	20.2	20.9	21.6	19.7	20.5	20.3	21.1	21.8
<b>4H</b>	<b>2H</b>	15.1	16.0	15.7	16.6	17.2	15.2	16.1	15.8	16.7	17.4
	<b>3H</b>	17.5	18.3	18.1	18.9	19.6	17.6	18.4	18.2	19.0	19.7
	<b>4H</b>	18.7	19.4	19.3	20.0	20.7	18.8	19.5	19.4	20.1	20.8
	<b>6H</b>	19.9	20.5	20.5	21.1	21.8	20.0	20.6	20.6	21.2	22.0
	<b>8H</b>	20.4	21.0	21.1	21.7	22.4	20.6	21.1	21.2	21.8	22.5
	<b>12H</b>	21.0	21.5	21.7	22.2	22.9	21.1	21.6	21.8	22.3	23.0
<b>8H</b>	<b>4H</b>	19.1	19.7	19.8	20.3	21.1	19.3	19.8	19.9	20.5	21.2
	<b>6H</b>	20.5	21.0	21.2	21.7	22.4	20.7	21.1	21.3	21.8	22.6
	<b>8H</b>	21.3	21.7	22.0	22.4	23.1	21.4	21.8	22.1	22.5	23.3
	<b>12H</b>	22.0	22.4	22.7	23.1	23.9	22.2	22.5	22.8	23.2	24.0
<b>12H</b>	<b>4H</b>	19.2	19.7	19.9	20.4	21.1	19.4	19.9	20.0	20.5	21.3
	<b>6H</b>	20.7	21.1	21.4	21.8	22.6	20.8	21.3	21.5	21.9	22.7
	<b>8H</b>	21.5	21.9	22.2	22.6	23.4	21.7	22.0	22.3	22.7	23.5

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0