Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

PRDDH12GV 55L 35K XX PR12 DR12A CN MW

Nom 12 inch diam, high bay, mid bay, low bay application

Test Number

SP-00456_28

Test Date

3/9/2021

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

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Summary of Results

Power

Input Watts	39 W

Lumen Output

Output Lumens	4852
Efficacy	124.42 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.25
Two luminaires, plane 90°	1.25
Four luminaires	1.1

Full Beam Angle

0° - 180°	76°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-00456_28
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 CN MW
LUMINAIRE	Nom 12 inch diam, high bay, mid bay, low bay application
OTHER	Prismatic refractor, door with conical lens
OTHER	Beam angle: 76 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

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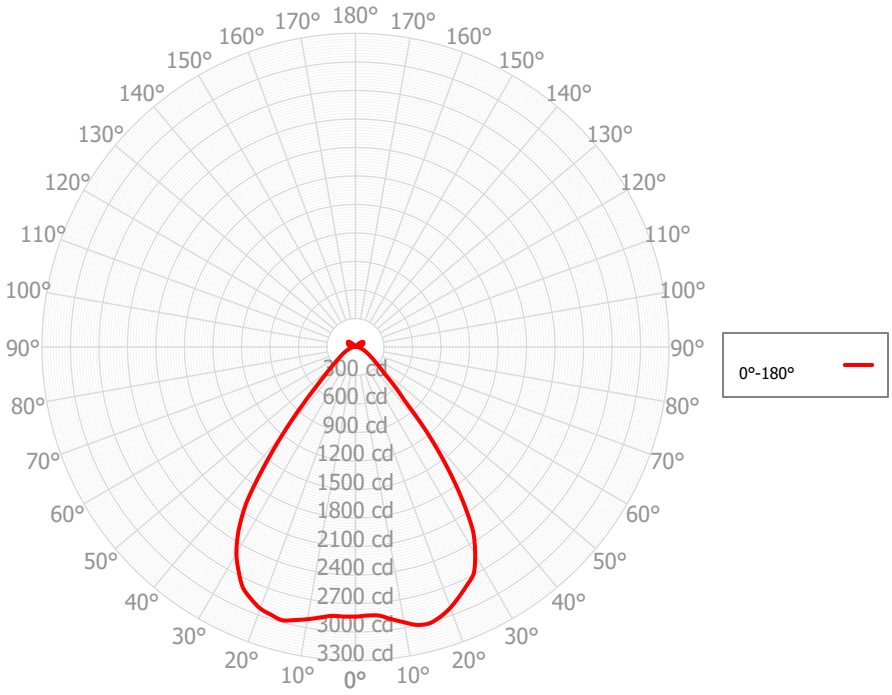
Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	278.72	5.74%	90.00° - 100.00°	47.68	0.98%
10.00° - 20.00°	839.91	17.31%	100.00° - 110.00°	78.41	1.62%
20.00° - 30.00°	1271.05	26.20%	100.00° - 120.00°	167.99	3.46%
30.00° - 40.00°	1186.63	24.46%	120.00° - 130.00°	83.20	1.71%
40.00° - 50.00°	481.51	9.92%	130.00° - 140.00°	46.38	0.96%
50.00° - 60.00°	209.04	4.31%	140.00° - 150.00°	11.84	0.24%
60.00° - 70.00°	122.08	2.52%	150.00° - 160.00°	1.27	0.03%
70.00° - 80.00°	67.69	1.40%	160.00° - 170.00°	0.73	0.01%
80.00° - 90.00°	36.21	0.75%	170.00° - 180.00°	0.26	0.01%
0.00° - 90.00°	4492.85	92.59%	0.00° - 180.00°	4852.20	100.00%

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Candela Distribution

	0.00°	180.00°
0.00°	2838.15	2838.15
2.50°	2829.10	2840.48
5.00°	2838.23	2840.93
7.50°	2889.78	2872.65
10.00°	2942.36	2909.69
12.50°	2996.61	2944.04
15.00°	3010.34	2977.29
17.50°	2976.09	2955.34
20.00°	2920.65	2930.07
22.50°	2846.81	2871.32
25.00°	2770.51	2799.45
27.50°	2692.68	2664.02
30.00°	2519.97	2508.11
32.50°	2305.98	2291.31
35.00°	1955.59	2003.90
37.50°	1564.58	1570.21
40.00°	1165.74	1170.12
42.50°	765.53	819.12
45.00°	579.39	571.20
47.50°	409.42	431.81
50.00°	338.15	335.04
52.50°	269.56	271.63
55.00°	229.21	225.96
57.50°	191.45	190.20
60.00°	166.55	164.10
62.50°	142.76	141.70
65.00°	122.51	121.79
67.50°	103.93	102.51
70.00°	88.88	87.84
72.50°	74.79	73.82
75.00°	62.12	63.90
77.50°	51.73	54.20
80.00°	43.85	45.42
82.50°	36.94	37.09
85.00°	30.79	32.32
87.50°	27.80	28.53
90.00°	26.60	28.83
92.50°	33.93	31.96
95.00°	44.70	42.86
97.50°	53.60	53.17
100.00°	62.01	62.39
102.50°	68.40	69.89
105.00°	74.49	75.10
107.50°	79.34	80.04
110.00°	84.09	84.70
112.50°	88.13	87.72

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Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
RCR	0	5691	5691	5691	5691	5517	5517	5517	5517	5192	5192	5192	4894	4894	4894	4621	4621	4621	4493
	1	5345	5179	5030	4895	5185	5037	4904	4783	4772	4667	4570	4529	4446	4369	4304	4241	4181	4124
	2	5006	4717	4477	4276	4859	4600	4383	4200	4380	4204	4052	4178	4036	3911	3990	3877	3776	3772
	3	4687	4309	4017	3784	4552	4211	3944	3729	4027	3805	3623	3857	3674	3520	3699	3549	3421	3455
	4	4390	3950	3628	3383	4266	3868	3571	3342	3712	3461	3263	3568	3356	3185	3433	3256	3110	3173
	5	4115	3634	3297	3049	4002	3563	3251	3018	3430	3162	2957	3307	3077	2897	3191	2996	2839	2922
	6	3862	3353	3011	2766	3760	3293	2974	2742	3179	2901	2694	3072	2831	2646	2972	2763	2600	2698
	7	3630	3104	2763	2524	3537	3052	2732	2504	2953	2671	2465	2860	2612	2427	2773	2556	2390	2498
	8	3418	2882	2545	2314	3332	2837	2519	2298	2750	2468	2266	2669	2418	2235	2593	2371	2204	2319
	9	3223	2684	2354	2131	3145	2644	2332	2118	2568	2288	2091	2497	2246	2065	2429	2205	2039	2158
	10	3044	2507	2185	1970	2973	2472	2165	1959	2404	2128	1937	2341	2091	1915	2281	2056	1893	2014

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	93.8 fc	4.3 ft
6.5 ft	67.2 fc	5.1 ft
7.5 ft	50.5 fc	5.8 ft
8.0 ft	44.3 fc	6.2 ft
10.0 ft	28.4 fc	7.8 ft
12.0 ft	19.7 fc	9.3 ft
14.0 ft	14.5 fc	10.9 ft
16.0 ft	11.1 fc	12.4 ft
20.0 ft	7.1 fc	15.6 ft
24.0 ft	4.9 fc	18.7 ft
28.0 ft	3.6 fc	21.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	38897	38897	38897
45.00°	11230	11190	11150
55.00°	5477	5457	5438
65.00°	3973	3967	3961
75.00°	3289	3313	3337
85.00°	4841	4902	4962

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UGR CIE 190:2010

Ceiling reflectance		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall reflectance		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Plane reflectance		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
2H	2H	12.1	13.2	12.6	13.6	14.1	12.1	13.1	12.6	13.6	14.1
	3H	13.3	14.3	13.9	14.8	15.3	13.3	14.3	13.8	14.7	15.3
	4H	13.8	14.7	14.4	15.2	15.8	13.8	14.7	14.3	15.2	15.8
	6H	14.3	15.1	14.8	15.6	16.2	14.3	15.1	14.8	15.6	16.2
	8H	14.5	15.2	15.0	15.8	16.4	14.5	15.3	15.1	15.8	16.4
	12H	14.7	15.5	15.3	16.0	16.6	14.7	15.5	15.3	16.0	16.6
4H	2H	12.5	13.3	13.0	13.8	14.4	12.4	13.3	13.0	13.8	14.4
	3H	13.9	14.7	14.5	15.2	15.8	13.9	14.6	14.4	15.2	15.7
	4H	14.5	15.2	15.1	15.8	16.4	14.5	15.2	15.1	15.7	16.4
	6H	15.1	15.7	15.7	16.3	16.9	15.2	15.7	15.7	16.3	16.9
	8H	15.4	16.0	16.0	16.5	17.2	15.5	16.0	16.0	16.6	17.2
	12H	15.8	16.2	16.4	16.8	17.5	15.8	16.3	16.4	16.9	17.5
8H	4H	14.7	15.3	15.3	15.8	16.5	14.7	15.3	15.3	15.8	16.5
	6H	15.5	15.9	16.1	16.6	17.2	15.5	16.0	16.2	16.6	17.2
	8H	15.9	16.3	16.6	17.0	17.6	16.0	16.3	16.6	17.0	17.6
	12H	16.4	16.8	17.1	17.4	18.1	16.5	16.8	17.1	17.4	18.2
12H	4H	14.8	15.2	15.4	15.8	16.5	14.8	15.2	15.4	15.8	16.5
	6H	15.6	16.0	16.2	16.6	17.3	15.6	16.0	16.3	16.6	17.3
	8H	16.1	16.4	16.7	17.0	17.8	16.1	16.4	16.8	17.1	17.8

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0

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