Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

PRDDH12GV 55L 35K XX PR12 DR12A DL MW

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

Test Number

SP-00456_30

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

Lumen Output

Output Lumens	4562
Efficacy	116.97 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.32
Two luminaires, plane 90°	1.32
Four luminaires	1.17

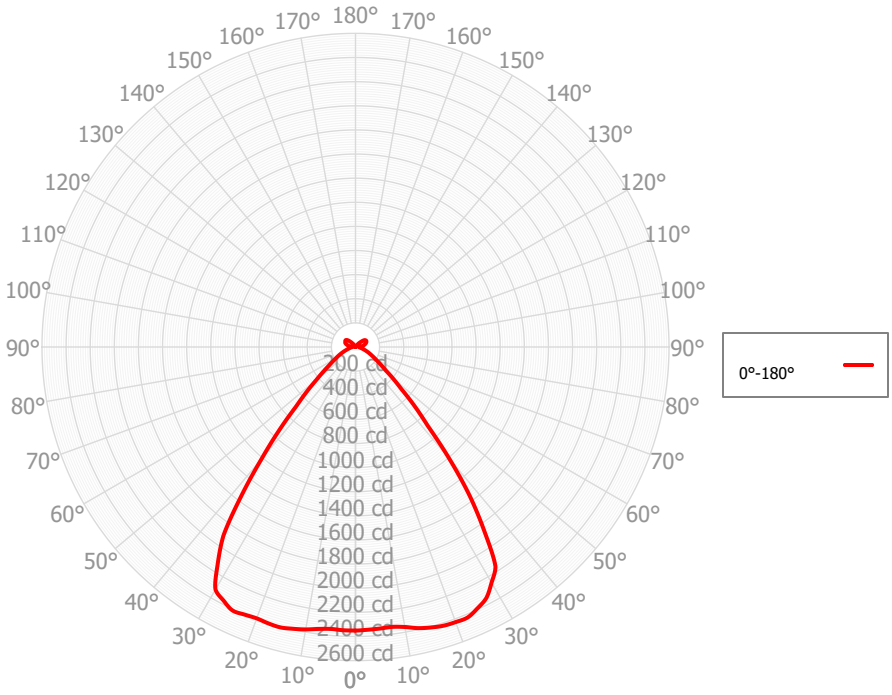
Full Beam Angle

0° - 180°	80°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-00456_30
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 DL MW
LUMINAIRE	Nom 12 inch diam, high bay, mid bay, low bay application
OTHER	Prismatic refractor, door with drop lens
OTHER	Beam angle: 80 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°	228.09	5.00%	90.00° - 100.00°	47.04	1.03%
10.00° - 20.00°	681.09	14.93%	100.00° - 110.00°	80.75	1.77%
20.00° - 30.00°	1100.29	24.12%	100.00° - 120.00°	175.95	3.86%
30.00° - 40.00°	1135.24	24.89%	120.00° - 130.00°	86.72	1.90%
40.00° - 50.00°	561.22	12.30%	130.00° - 140.00°	47.20	1.03%
50.00° - 60.00°	245.33	5.38%	140.00° - 150.00°	11.39	0.25%
60.00° - 70.00°	133.83	2.93%	150.00° - 160.00°	1.03	0.02%
70.00° - 80.00°	69.90	1.53%	160.00° - 170.00°	0.59	0.01%
80.00° - 90.00°	36.54	0.80%	170.00° - 180.00°	0.21	0.00%
0.00° - 90.00°	4191.53	91.89%	0.00° - 180.00°	4561.66	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	2351.78	2351.78
2.50°	2347.12	2351.36
5.00°	2343.60	2347.07
7.50°	2341.18	2358.46
10.00°	2357.94	2378.40
12.50°	2388.12	2393.71
15.00°	2408.42	2407.29
17.50°	2423.82	2403.44
20.00°	2428.01	2395.27
22.50°	2428.32	2402.37
25.00°	2392.21	2411.50
27.50°	2348.31	2370.67
30.00°	2257.04	2322.22
32.50°	2160.78	2125.09
35.00°	1861.88	1909.21
37.50°	1556.08	1552.85
40.00°	1211.99	1212.42
42.50°	888.70	936.31
45.00°	693.26	695.12
47.50°	515.98	547.26
50.00°	405.47	421.47
52.50°	311.61	336.08
55.00°	257.65	268.69
57.50°	211.90	224.79
60.00°	179.82	189.19
62.50°	152.36	161.64
65.00°	130.50	136.84
67.50°	110.76	113.96
70.00°	92.91	94.79
72.50°	77.56	77.45
75.00°	63.78	65.15
77.50°	53.02	54.53
80.00°	43.59	46.56
82.50°	36.89	39.15
85.00°	31.02	32.91
87.50°	28.59	26.80
90.00°	26.77	28.76
92.50°	34.43	31.32
95.00°	42.83	41.41
97.50°	54.09	51.26
100.00°	65.00	59.57
102.50°	71.77	67.65
105.00°	78.53	74.91
107.50°	85.16	81.81
110.00°	91.30	87.88
112.50°	95.80	92.17

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	5342	5342	5342	5342	5175	5175	5175	5175	4863	4863	4863	4577	4577	4577	4315	4315	4315	4192
	1	5004	4842	4696	4565	4849	4705	4575	4457	4450	4346	4252	4215	4134	4059	3998	3936	3878	3824
	2	4671	4388	4154	3958	4528	4275	4063	3884	4062	3890	3741	3866	3727	3605	3685	3574	3475	3474
	3	4357	3988	3703	3475	4226	3893	3632	3422	3714	3497	3319	3549	3370	3219	3395	3249	3123	3160
	4	4067	3638	3323	3083	3946	3557	3268	3044	3405	3161	2967	3265	3058	2891	3134	2961	2818	2882
	5	3799	3330	3001	2759	3689	3261	2956	2729	3131	2870	2669	3010	2786	2611	2898	2707	2554	2637
	6	3554	3058	2725	2486	3454	2999	2688	2462	2888	2617	2415	2783	2548	2369	2685	2482	2323	2420
	7	3331	2819	2487	2254	3239	2768	2456	2235	2671	2396	2197	2580	2339	2159	2494	2283	2122	2229
	8	3127	2607	2279	2055	3043	2562	2254	2039	2477	2203	2007	2398	2154	1976	2323	2107	1946	2059
	9	2941	2418	2098	1882	2864	2379	2076	1868	2304	2033	1842	2234	1991	1816	2168	1950	1790	1907
	10	2772	2250	1939	1731	2702	2216	1919	1720	2150	1882	1697	2087	1846	1675	2028	1811	1653	1772

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	77.7 fc	4.6 ft
6.5 ft	55.7 fc	5.5 ft
7.5 ft	41.8 fc	6.3 ft
8.0 ft	36.7 fc	6.7 ft
10.0 ft	23.5 fc	8.4 ft
12.0 ft	16.3 fc	10.1 ft
14.0 ft	12.0 fc	11.7 ft
16.0 ft	9.2 fc	13.4 ft
20.0 ft	5.9 fc	16.8 ft
24.0 ft	4.1 fc	20.1 ft
28.0 ft	3.0 fc	23.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	32231	32231	32231
45.00°	13437	13446	13455
55.00°	6156	6222	6288
65.00°	4232	4283	4335
75.00°	3378	3396	3414
85.00°	4878	4953	5027

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	13.0	14.1	13.5	14.5	15.1	13.2	14.3	13.7	14.7	15.3
	3H	14.1	15.1	14.6	15.6	16.1	14.3	15.3	14.8	15.7	16.3
	4H	14.5	15.4	15.1	16.0	16.5	14.7	15.6	15.2	16.1	16.7
	6H	14.9	15.8	15.5	16.3	16.9	15.1	15.9	15.6	16.4	17.0
	8H	15.1	15.9	15.7	16.4	17.0	15.3	16.0	15.8	16.6	17.2
	12H	15.3	16.1	15.9	16.6	17.2	15.5	16.2	16.0	16.8	17.4
4H	2H	13.3	14.2	13.8	14.7	15.3	13.5	14.4	14.0	14.9	15.5
	3H	14.7	15.4	15.2	16.0	16.6	14.8	15.6	15.4	16.1	16.7
	4H	15.2	15.9	15.8	16.5	17.1	15.3	16.0	15.9	16.6	17.2
	6H	15.7	16.3	16.3	16.9	17.6	15.9	16.5	16.5	17.0	17.7
	8H	16.0	16.5	16.6	17.1	17.8	16.1	16.7	16.7	17.3	17.9
	12H	16.3	16.8	16.9	17.4	18.0	16.4	16.9	17.1	17.5	18.2
8H	4H	15.4	15.9	16.0	16.5	17.2	15.5	16.1	16.1	16.7	17.3
	6H	16.1	16.5	16.7	17.1	17.8	16.2	16.6	16.8	17.3	17.9
	8H	16.4	16.8	17.1	17.5	18.2	16.6	17.0	17.2	17.6	18.3
	12H	16.9	17.3	17.5	17.9	18.6	17.1	17.4	17.7	18.0	18.8
12H	4H	15.4	15.9	16.0	16.5	17.2	15.5	16.0	16.1	16.6	17.3
	6H	16.1	16.5	16.8	17.1	17.9	16.3	16.7	16.9	17.3	18.0
	8H	16.6	16.9	17.2	17.6	18.3	16.7	17.1	17.4	17.7	18.5

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0