

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

DMD22GZ 240L 35K DX AL22 MWI MW
Nom 22" diam round High Bay luminaire

Test Number

SP-01001

Test Date

12/16/2019

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

Summary of Results

Power

Input Watts	180 W
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Lumen Output

Output Lumens	24229
Efficacy	134.6 lm/W

Luminous Dimensions

0° - 180° Size	-1.83
90° - 270° Size	-1.83
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.21
Two luminaires, plane 90°	1.21
Four luminaires	1.34

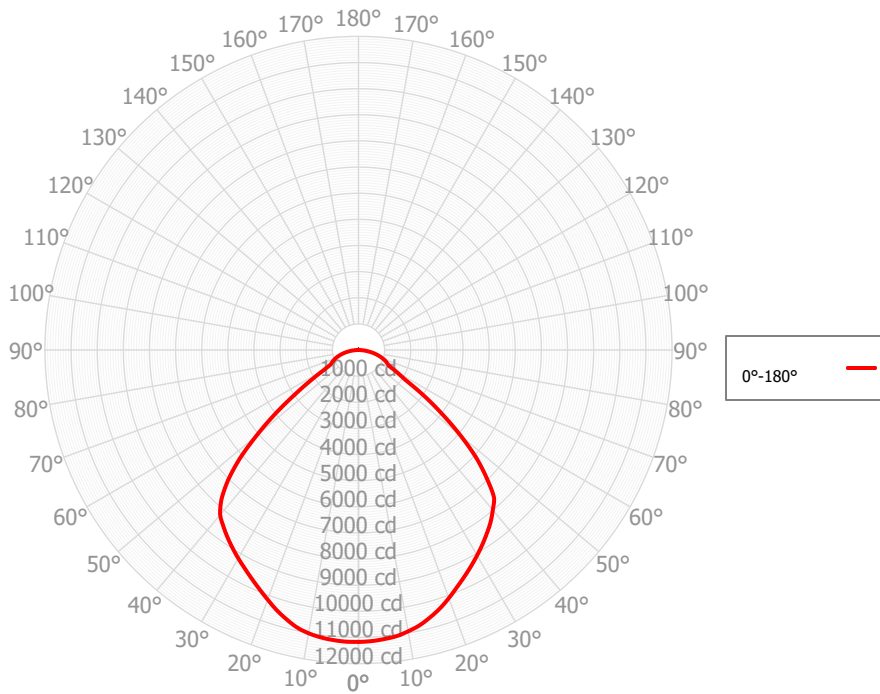
Full Beam Angle

0° - 180°	98°
90° - 270°	0°

IES File Header Contents

Keyword	Value
TEST	SP-01001
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	12/16/2019
ISSUEDATE	2/12/2020
LUMCAT	DMD22GZ 240L 35K DX AL22 MWI MW
LUMINAIRE	Nom 22" diam round High Bay luminaire
OTHER	Reflector: Matte white interior
LAMPCAT	N/A
LAMP	N/A
OTHER	Beam Angle: 97.7 deg
OTHER	Uplight: 0%
OTHER	Downlight: 100%
OTHER	CCT Output Multipliers: 27K x 0.95, 30K x 0.97, 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80
_CCTMULT	27K x 0.95, 30K x 0.97, 40K x 1.03
_LAMPMULT	N/A, only 240L tested

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	1,073.40	4.43%	90.00° - 100.00°	7.49	0.03%
10.00° - 20.00°	2,990.98	12.34%	100.00° - 110.00°	2.55	0.01%
20.00° - 30.00°	4,438.98	18.32%	100.00° - 120.00°	6.33	0.03%
30.00° - 40.00°	5,416.32	22.35%	120.00° - 130.00°	4.47	0.02%
40.00° - 50.00°	5,282.62	21.80%	130.00° - 140.00°	4.72	0.02%
50.00° - 60.00°	2,781.09	11.48%	140.00° - 150.00°	4.20	0.02%
60.00° - 70.00°	1,187.78	4.90%	150.00° - 160.00°	3.01	0.01%
70.00° - 80.00°	775.41	3.20%	160.00° - 170.00°	1.83	0.01%
80.00° - 90.00°	249.47	1.03%	170.00° - 180.00°	0.65	0.00%
0.00° - 90.00°	24,196.05	99.86%	0.00° - 180.00°	24,228.77	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	11,173.40	11,173.40
2.50°	11,154.97	11,175.02
5.00°	11,109.63	11,143.74
7.50°	11,051.71	11,093.50
10.00°	10,935.56	11,008.65
12.50°	10,794.53	10,876.89
15.00°	10,593.90	10,666.38
17.50°	10,369.68	10,433.61
20.00°	10,108.59	10,166.41
22.50°	9,834.26	9,908.01
25.00°	9,578.73	9,662.36
27.50°	9,329.29	9,426.95
30.00°	9,078.27	9,205.22
32.50°	8,826.79	8,978.60
35.00°	8,566.88	8,745.95
37.50°	8,304.75	8,499.65
40.00°	7,998.11	8,237.55
42.50°	7,680.80	7,766.36
45.00°	6,945.58	7,070.96
47.50°	6,122.23	6,179.02
50.00°	5,108.07	5,089.29
52.50°	4,058.97	4,024.29
55.00°	3,083.03	2,982.33
57.50°	2,118.89	2,160.99
60.00°	1,687.95	1,529.71
62.50°	1,329.38	1,201.19
65.00°	1,216.74	1,117.35
67.50°	1,131.46	1,028.53
70.00°	1,015.17	936.00
72.50°	896.03	830.18
75.00°	762.66	715.19
77.50°	628.31	595.31
80.00°	486.28	472.28
82.50°	343.90	346.40
85.00°	211.47	218.84
87.50°	79.34	118.79
90.00°	40.39	33.79
92.50°	2.75	3.81
95.00°	2.92	1.88
97.50°	3.09	1.19
100.00°	2.94	1.06
102.50°	2.81	1.41
105.00°	3.10	1.96
107.50°	3.40	1.89
110.00°	3.85	1.58
112.50°	4.35	1.95

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	pfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%
RCR	0	28,836	28,836	28,836	28,836	28,162	28,162	28,162	28,162	26,903	26,903	26,903	25,751	25,751	25,751	24,693	24,693	24,693
	1	26,800	25,835	24,971	24,192	26,161	25,292	24,508	23,798	24,275	23,634	23,047	23,340	22,823	22,343	22,479	22,066	21,681
	2	24,766	23,073	21,673	20,497	24,162	22,626	21,343	20,255	21,788	20,714	19,787	21,015	20,124	19,341	20,300	19,568	18,916
	3	22,880	20,674	18,966	17,606	22,316	20,303	18,723	17,451	19,605	18,258	17,148	18,960	17,817	16,856	18,361	17,398	16,575
	4	21,164	18,609	16,738	15,309	20,643	18,299	16,554	15,205	17,713	16,201	15,003	17,170	15,864	14,806	16,664	15,542	14,614
	5	19,614	16,831	14,886	13,451	19,136	16,569	14,744	13,380	16,075	14,470	13,239	15,615	14,207	13,102	15,185	13,956	12,968
	6	18,218	15,295	13,333	11,925	17,782	15,074	13,222	11,875	14,654	13,005	11,775	14,261	12,796	11,677	13,894	12,596	11,581
	7	16,965	13,966	12,021	10,657	16,568	13,777	11,931	10,621	13,417	11,757	10,548	13,081	11,589	10,476	12,765	11,427	10,405
	8	15,841	12,810	10,903	9,593	15,480	12,648	10,830	9,565	12,338	10,688	9,511	12,048	10,551	9,457	11,775	10,418	9,404
	9	14,832	11,802	9,945	8,691	14,504	11,661	9,885	8,670	11,394	9,768	8,628	11,142	9,654	8,587	10,904	9,544	8,546
	10	13,925	10,918	9,119	7,921	13,627	10,797	9,069	7,904	10,564	8,971	7,872	10,344	8,876	7,839	10,136	8,784	7,807

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	369.4 fc	12.6 ft
6.5 ft	264.5 fc	14.9 ft
7.5 ft	198.6 fc	17.2 ft
8.0 ft	174.6 fc	18.3 ft
10.0 ft	111.7 fc	22.9 ft
12.0 ft	77.6 fc	27.5 ft
14.0 ft	57.0 fc	32.0 ft
16.0 ft	43.6 fc	36.6 ft
20.0 ft	27.9 fc	45.8 ft
24.0 ft	19.4 fc	54.9 ft
28.0 ft	14.3 fc	64.1 ft

Average Luminaire Luminance [cd/m

	0.00°	45.00°	90.00°
0.00°	45,726	45,726	45,726
45.00°	40,198	40,379	40,561
55.00°	21,997	21,817	21,638
65.00°	11,782	11,542	11,301
75.00°	12,059	11,871	11,684
85.00°	9,929	10,016	10,103

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	19.0	20.4	19.3	20.7	21.0	19.0	20.5	19.4	20.8	21.1
	3H	20.3	21.5	20.6	21.9	22.2	20.2	21.5	20.6	21.8	22.2
	4H	20.9	22.1	21.3	22.4	22.8	20.8	22.0	21.2	22.3	22.7
	6H	21.4	22.5	21.8	22.9	23.3	21.3	22.4	21.7	22.8	23.2
	8H	21.6	22.6	22.0	23.0	23.4	21.5	22.5	21.9	22.9	23.3
	12H	21.7	22.7	22.1	23.1	23.5	21.6	22.6	22.0	23.0	23.4
4H	2H	19.3	20.5	19.7	20.8	21.2	19.3	20.5	19.7	20.8	21.2
	3H	20.9	21.9	21.3	22.3	22.7	20.8	21.8	21.2	22.2	22.6
	4H	21.7	22.6	22.1	23.0	23.4	21.5	22.4	22.0	22.8	23.3
	6H	22.3	23.1	22.8	23.6	24.0	22.2	23.0	22.7	23.4	23.9
	8H	22.6	23.3	23.0	23.7	24.2	22.4	23.1	22.9	23.6	24.1
	12H	22.7	23.4	23.2	23.8	24.3	22.6	23.2	23.1	23.7	24.2
8H	4H	21.9	22.7	22.4	23.1	23.6	21.8	22.5	22.3	23.0	23.4
	6H	22.7	23.3	23.2	23.8	24.3	22.6	23.2	23.1	23.7	24.2
	8H	23.0	23.6	23.6	24.1	24.6	22.9	23.5	23.4	24.0	24.5
	12H	23.3	23.8	23.8	24.3	24.8	23.2	23.7	23.7	24.1	24.7
12H	4H	22.0	22.6	22.5	23.1	23.6	21.8	22.5	22.3	22.9	23.4
	6H	22.8	23.3	23.3	23.8	24.4	22.7	23.2	23.2	23.7	24.2
	8H	23.2	23.6	23.7	24.1	24.7	23.0	23.5	23.5	24.0	24.6

Corrected UGR values based on total output lumens

SHR = 1.0