

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SN12 MED xx xx MWI G40 Opal
12" x 29" Spin Pendant Medium Base E26 MWI

Test Number

SP-01609

Test Date

12/18/2023

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

Summary of Results

Power

Input Watts	8.7 W
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Lumen Output

Output Lumens	633
Efficacy	72.73 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.09
Two luminaires, plane 90°	1.1
Four luminaires	1.12

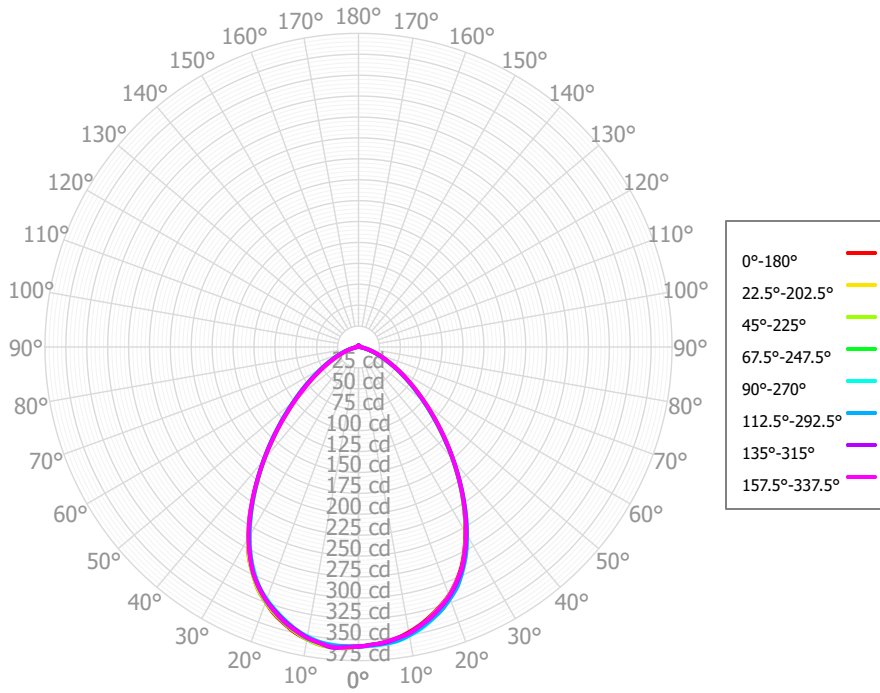
Full Beam Angle

0° - 180°	79°
90° - 270°	79°

IES File Header Contents

Keyword	Value
TEST	SP-01609
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	12/18/2023
ISSUEDATE	12/20/2023
LUMCAT	SN12 MED xx xx MWI G40 Opal
LUMINAIRE	12" x 29" Spin Pendant Medium Base E26 MWI
OTHER	Beam Angle: 78 deg
OTHER	Tested Bulb: SATCO LED 11W A19 3000K Part Number S29811
OTHER	Total luminaire wattages are approximate
OTHER	This report prepared by Spectrum Lighting

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	34.43	5.44%	90.00° - 100.00°	1.74	0.28%
10.00° - 20.00°	95.02	15.02%	100.00° - 110.00°	1.70	0.27%
20.00° - 30.00°	134.83	21.31%	100.00° - 120.00°	3.32	0.52%
30.00° - 40.00°	135.76	21.46%	120.00° - 130.00°	1.46	0.23%
40.00° - 50.00°	105.13	16.62%	130.00° - 140.00°	1.27	0.20%
50.00° - 60.00°	66.26	10.47%	140.00° - 150.00°	1.06	0.17%
60.00° - 70.00°	34.49	5.45%	150.00° - 160.00°	0.77	0.12%
70.00° - 80.00°	13.17	2.08%	160.00° - 170.00°	0.47	0.07%
80.00° - 90.00°	3.38	0.53%	170.00° - 180.00°	0.16	0.03%
0.00° - 90.00°	622.47	98.38%	0.00° - 180.00°	632.73	100.00%

Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°	112.50°	135.00°	157.50°	180.00°	202.50°	225.00°	247.50°	270.00°	292.50°	315.00°	337.50°	360.00°
0.00°	358.25	358.25	358.25	358.25	358.25	358.25	358.25	358.25	358.25	358.25	358.25	358.25	358.25	358.25	358.25	358.25	358.25
2.50°	356.72	357.64	356.97	356.42	357.84	358.11	359.44	359.73	360.60	360.50	360.41	358.49	358.87	357.35	356.45	356.60	356.72
5.00°	354.56	356.06	355.97	355.19	356.83	358.12	360.94	360.03	360.23	360.48	360.63	359.57	357.49	356.14	355.29	354.50	354.56
7.50°	351.29	352.75	352.69	352.78	354.93	356.00	357.18	357.13	358.95	358.64	358.97	356.95	355.80	354.43	351.65	351.27	351.29
10.00°	346.39	348.66	348.09	349.46	350.57	352.02	353.06	353.44	354.91	354.85	354.77	354.10	351.37	350.00	347.72	347.94	346.39
12.50°	340.38	342.03	341.71	342.84	345.30	346.03	346.71	347.62	350.03	349.04	348.44	348.07	346.69	344.07	341.33	341.50	340.38
15.00°	333.11	334.55	334.54	335.68	338.10	338.66	339.94	340.92	342.78	341.99	341.40	341.80	338.55	337.25	334.66	334.89	333.11
17.50°	324.96	325.89	325.82	327.11	329.95	330.48	331.42	332.42	335.03	333.92	333.89	332.79	330.26	330.06	326.50	326.03	324.96
20.00°	316.02	316.94	316.59	317.63	320.26	321.88	322.23	322.88	324.64	324.37	324.18	323.41	320.68	320.34	317.61	316.91	316.02
22.50°	304.41	305.26	305.07	306.35	308.82	310.10	311.04	311.69	313.92	313.87	313.35	311.69	310.59	309.83	306.08	305.09	304.41
25.00°	290.91	293.17	293.01	292.77	295.18	297.03	298.09	298.07	299.02	299.59	298.77	298.74	295.55	294.60	293.04	292.50	290.91
27.50°	274.16	275.64	275.57	275.65	278.85	279.59	281.24	281.40	283.85	283.44	282.74	280.78	279.80	278.34	276.13	275.43	274.16
30.00°	255.60	257.67	257.32	257.04	259.83	260.86	262.71	262.73	263.53	263.10	262.82	261.83	259.97	259.04	258.19	257.69	255.60
32.50°	236.26	237.60	236.78	236.62	239.44	240.36	241.33	242.09	243.06	241.18	241.83	239.99	239.86	239.33	238.24	237.40	236.26
35.00°	216.59	217.46	216.07	216.08	218.00	219.51	219.61	220.29	220.34	219.27	219.55	218.14	218.73	218.20	217.83	216.99	216.59
37.50°	196.43	196.54	195.90	195.42	197.01	198.08	197.42	197.59	197.72	197.37	197.03	196.25	197.54	196.98	196.73	196.29	196.43
40.00°	176.13	175.85	175.74	174.96	176.30	176.57	175.90	175.55	175.77	175.35	175.39	174.97	176.20	176.72	176.03	176.10	176.13
42.50°	156.55	157.13	155.84	154.64	156.62	156.16	155.07	153.91	154.24	153.32	153.84	154.67	155.48	156.53	155.79	156.94	156.55
45.00°	137.13	138.63	136.30	135.76	137.42	135.83	135.27	134.08	134.53	133.68	134.49	135.06	136.02	137.59	137.00	138.25	137.13
47.50°	120.22	121.28	119.84	117.71	119.64	118.28	116.34	115.10	115.48	114.29	115.31	116.34	117.68	118.99	119.55	120.29	120.22
50.00°	103.64	104.59	103.70	101.95	102.36	100.94	99.96	98.34	98.47	98.75	99.40	99.70	101.07	102.99	103.57	103.89	103.64
52.50°	89.38	90.18	89.21	87.21	88.21	86.48	85.22	82.36	82.75	83.41	83.74	85.21	85.98	87.57	88.67	89.43	89.38
55.00°	75.27	76.53	75.45	74.45	74.85	72.41	71.74	69.65	69.97	70.98	71.02	72.15	72.77	74.92	75.69	76.26	75.27
57.50°	64.50	64.82	64.16	62.34	63.48	61.02	58.88	57.76	58.05	58.73	58.70	60.23	60.99	62.83	63.80	64.36	64.50
60.00°	53.85	54.04	53.56	52.44	52.44	50.13	49.07	47.93	47.65	48.39	48.86	50.04	50.61	52.52	53.15	53.73	53.85
62.50°	44.83	45.05	44.67	43.06	43.59	41.40	40.42	38.44	38.58	38.57	39.63	40.92	41.72	43.03	43.03	44.10	44.83
65.00°	36.05	36.79	36.46	35.07	34.94	33.27	32.94	31.59	31.34	31.88	32.87	33.37	34.00	35.50	35.27	36.34	36.05
67.50°	29.17	29.63	29.53	27.30	28.65	26.98	25.79	24.96	24.98	25.37	26.24	26.59	27.35	28.51	28.28	29.73	29.17
70.00°	22.57	23.26	23.22	21.61	22.45	21.08	20.14	19.87	19.56	19.62	19.98	20.65	21.36	22.52	22.47	23.71	22.57
72.50°	17.31	17.83	17.86	16.08	17.01	16.07	14.77	14.85	14.89	14.42	14.46	15.02	16.22	17.05	16.92	17.98	17.31
75.00°	12.54	13.42	13.28	12.09	11.80	11.75	10.79	10.95	10.87	10.79	10.54	11.16	11.49	12.32	12.58	13.42	12.54
77.50°	9.38	9.96	9.62	8.20	8.83	8.64	6.96	7.24	7.68	7.58	7.29	7.76	8.10	8.61	8.41	9.28	9.38
80.00°	6.53	7.08	6.69	6.16	6.08	6.08	5.23	5.25	5.05	5.29	5.19	5.57	5.17	6.03	5.98	6.70	6.53
82.50°	4.42	4.65	4.42	4.21	4.50	4.27	3.60	3.41	3.36	3.48	3.53	3.59	3.59	4.14	3.68	4.51	4.42
85.00°	2.80	3.15	2.96	3.06	3.09	2.91	2.56	2.40	2.15	2.46	2.44	2.68	2.33	2.85	2.72	3.15	2.80
87.50°	2.06	2.18	2.09	2.06	2.28	2.05	1.61	1.59	1.73	1.87	1.79	1.88	1.87	2.15	1.81	1.93	2.06
90.00°	1.59	1.81	1.69	1.86	1.67	1.62	1.59	1.50	1.61	1.82	1.59	1.71	1.54	1.86	1.60	1.71	1.59
92.50°	1.53	1.71	1.55	1.68	1.59	1.56	1.58	1.46	1.64	1.74	1.58	1.56	1.49	1.72	1.42	1.59	1.53
95.00°	1.47	1.69	1.57	1.54	1.54	1.60	1.60	1.56	1.71	1.61	1.72	1.49	1.46	1.67	1.52	1.59	1.47
97.50°	1.43	1.69	1.65	1.47	1.55	1.69	1.60	1.60	1.68	1.57	1.72	1.44	1.40	1.67	1.59	1.60	1.43
100.00°	1.44	1.72	1.70	1.54	1.56	1.74	1.56	1.56	1.62	1.60	1.65	1.55	1.35	1.69	1.52	1.60	1.44
102.50°	1.51	1.76	1.73	1.60	1.56	1.77	1.51	1.55	1.64	1.62	1.61	1.63	1.42	1.73	1.48	1.59	1.51
105.00°	1.51	1.76	1.74	1.62	1.58	1.71	1.47	1.58	1.67	1.64	1.60	1.60	1.48	1.77	1.48	1.62	1.51

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	ptc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	751	751	751	751	732	732	732	732	697	697	697	665	665	665	636	636	622
	1	701	678	657	638	684	663	644	626	635	619	605	609	597	585	585	575	563
	2	651	610	575	546	635	597	566	539	574	548	525	553	531	512	533	515	504
	3	604	550	508	474	589	539	501	469	520	487	460	502	474	451	486	462	452
	4	561	498	452	416	547	489	446	413	473	436	407	458	426	400	444	417	408
	5	523	453	405	369	510	446	401	367	432	393	362	420	385	358	408	378	370
	6	487	415	366	331	476	409	363	329	397	356	326	386	350	322	376	344	337
	7	456	381	333	299	445	376	330	297	366	325	295	356	320	292	348	315	309
	8	427	352	304	271	418	347	302	270	339	298	268	330	293	266	323	289	284
	9	402	326	279	248	393	322	278	247	314	274	246	307	271	244	301	267	262
	10	378	303	258	228	371	300	257	227	293	254	226	287	251	225	281	248	244

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	11.8 fc	9.1 ft
6.5 ft	8.5 fc	10.7 ft
7.5 ft	6.4 fc	12.3 ft
8.0 ft	5.6 fc	13.2 ft
10.0 ft	3.6 fc	16.5 ft
12.0 ft	2.5 fc	19.8 ft
14.0 ft	1.8 fc	23.1 ft
16.0 ft	1.4 fc	26.3 ft
20.0 ft	0.9 fc	32.9 ft
24.0 ft	0.6 fc	39.5 ft
28.0 ft	0.5 fc	46.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	4910	4910	4910
45.00°	2658	2642	2663
55.00°	1798	1803	1788
65.00°	1169	1182	1133
75.00°	664	703	625
85.00°	441	466	486

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	11.6	13.0	12.0	13.3	13.7	11.2	12.6	11.6	12.9	13.3
	3H	12.5	13.7	12.9	14.0	14.4	12.0	13.2	12.5	13.6	14.0
	4H	12.7	13.8	13.1	14.2	14.6	12.2	13.4	12.7	13.7	14.2
	6H	12.8	13.8	13.2	14.2	14.6	12.3	13.3	12.8	13.7	14.2
	8H	12.8	13.8	13.3	14.2	14.6	12.3	13.3	12.8	13.7	14.2
	12H	12.8	13.7	13.3	14.1	14.6	12.3	13.3	12.8	13.7	14.1
4H	2H	11.9	13.0	12.3	13.4	13.8	11.5	12.6	11.9	13.0	13.4
	3H	12.9	13.8	13.4	14.3	14.7	12.4	13.4	12.9	13.8	14.2
	4H	13.2	14.0	13.7	14.5	15.0	12.7	13.5	13.2	14.0	14.4
	6H	13.4	14.1	13.9	14.6	15.1	12.8	13.5	13.3	14.0	14.5
	8H	13.4	14.1	13.9	14.5	15.1	12.9	13.5	13.4	14.0	14.5
	12H	13.4	14.0	13.9	14.5	15.0	12.9	13.5	13.4	14.0	14.5
8H	4H	13.3	13.9	13.7	14.4	14.9	12.7	13.4	13.2	13.8	14.3
	6H	13.5	14.0	14.0	14.5	15.1	12.9	13.4	13.4	13.9	14.5
	8H	13.5	14.0	14.1	14.6	15.1	12.9	13.4	13.5	14.0	14.5
	12H	13.6	14.0	14.1	14.5	15.2	13.0	13.4	13.5	13.9	14.6
12H	4H	13.2	13.8	13.7	14.3	14.8	12.7	13.3	13.2	13.8	14.3
	6H	13.5	13.9	14.0	14.4	15.0	12.9	13.3	13.4	13.8	14.4
	8H	13.5	14.0	14.1	14.5	15.1	12.9	13.4	13.5	13.9	14.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0