

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SN24 MED xx xx MWI G40 Opal
24" x 23.5" Spin Pendant Medium Base E26 MWI

Test Number

SP-01612

Test Date

11/8/2023

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	839
Efficacy	96.4 lm/W

Luminous Dimensions

0° - 180° Size	-2
90° - 270° Size	-2
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.12
Two luminaires, plane 90°	1.13
Four luminaires	1.26

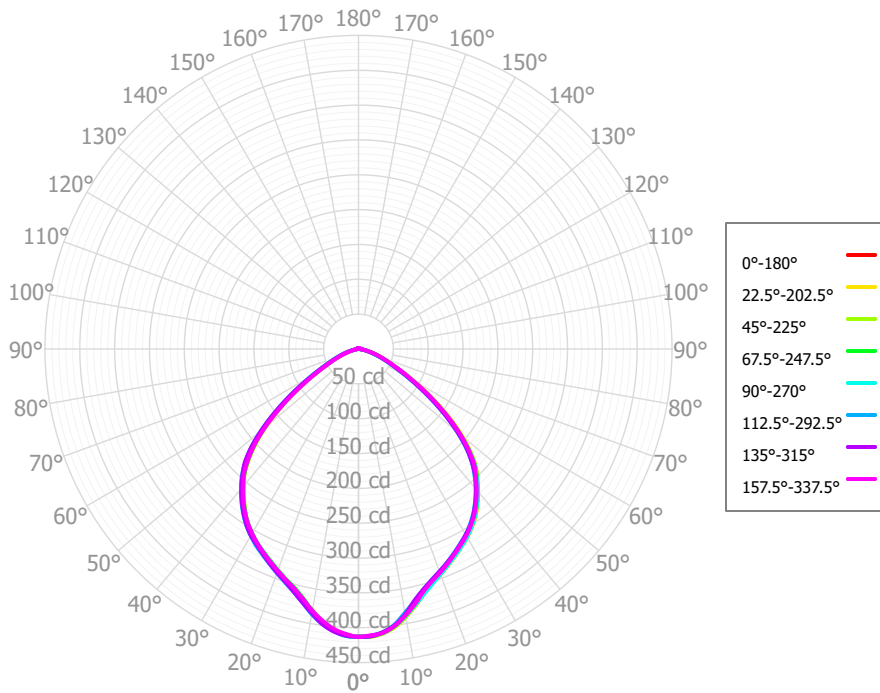
Full Beam Angle

0° - 180°	95°
90° - 270°	95°

IES File Header Contents

Keyword	Value
TEST	SP-01612
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/8/2023
ISSUEDATE	11/14/2023
LUMCAT	SN24 MED xx xx MWI G40 Opal
LUMINAIRE	24" x 23.5" Spin Pendant Medium Base E26 MWI
OTHER	Beam Angle: 95 deg
OTHER	Tested Bulb: CTRLCV Model No: G125/G45 2700K-3000K Part Number: XX/DNTB/E26G125/15W30/1D.
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°	38.69	4.61%	90.00° - 100.00°	1.13	0.13%
10.00° - 20.00°	101.51	12.10%	100.00° - 110.00°	1.10	0.13%
20.00° - 30.00°	149.72	17.85%	100.00° - 120.00°	2.15	0.26%
30.00° - 40.00°	179.47	21.40%	120.00° - 130.00°	0.94	0.11%
40.00° - 50.00°	174.90	20.86%	130.00° - 140.00°	0.84	0.10%
50.00° - 60.00°	115.79	13.81%	140.00° - 150.00°	0.69	0.08%
60.00° - 70.00°	50.41	6.01%	150.00° - 160.00°	0.52	0.06%
70.00° - 80.00°	17.97	2.14%	160.00° - 170.00°	0.32	0.04%
80.00° - 90.00°	3.49	0.42%	170.00° - 180.00°	0.11	0.01%
0.00° - 90.00°	831.95	99.20%	0.00° - 180.00°	838.64	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°	413.12	413.12	413.12	413.12	413.12	413.12	413.12	413.12	413.12	413.12	413.12	413.12	413.12	413.12	413.12	413.12	413.12
2.50°	412.46	413.57	412.42	412.75	411.91	411.63	411.96	409.49	410.18	411.42	410.62	411.93	412.47	411.97	412.83	411.38	412.46
5.00°	408.14	409.69	408.72	409.11	407.72	406.53	407.06	403.56	404.22	404.26	405.90	405.60	406.28	407.95	407.92	408.71	408.14
7.50°	400.57	402.41	401.75	401.15	400.25	398.11	398.36	393.57	394.60	394.10	395.95	394.84	396.66	398.63	399.96	400.58	400.57
10.00°	388.34	390.33	390.32	389.32	388.16	386.55	385.26	381.57	381.04	381.51	381.44	381.72	383.53	384.36	386.85	388.18	388.34
12.50°	372.55	377.52	374.67	376.57	376.08	372.22	372.59	367.46	368.57	367.53	368.54	366.44	368.37	370.86	370.13	374.71	372.55
15.00°	360.30	363.76	362.18	363.05	364.01	360.57	360.40	355.97	357.20	356.60	356.95	354.81	357.12	358.01	357.75	360.44	360.30
17.50°	350.57	352.47	352.51	352.37	353.22	351.13	350.10	347.07	347.31	347.31	347.31	346.31	347.98	347.88	348.23	349.87	350.57
20.00°	341.82	344.25	343.42	343.94	344.00	342.27	341.73	338.59	338.83	338.62	339.15	337.86	339.20	339.95	339.86	341.82	341.82
22.50°	333.71	336.14	334.81	335.37	335.44	333.84	333.26	330.52	330.72	330.24	331.09	329.44	330.62	331.84	332.18	333.62	333.71
25.00°	325.74	328.16	326.80	326.71	327.65	325.87	324.71	322.45	322.92	322.30	323.09	321.68	322.40	323.60	324.25	325.34	325.74
27.50°	317.83	320.18	319.27	318.74	319.76	318.22	316.68	314.38	314.88	314.57	314.95	314.43	314.36	315.57	316.17	317.31	317.83
30.00°	309.54	312.21	310.90	311.24	311.75	309.40	309.11	305.45	306.65	305.62	306.70	305.62	305.83	307.67	307.81	309.43	309.54
32.50°	301.02	303.10	301.90	302.12	302.34	299.80	299.36	295.80	296.69	296.14	296.34	295.72	297.09	298.10	299.30	300.07	301.02
35.00°	290.12	292.82	291.26	291.95	291.49	288.45	287.77	284.45	285.40	283.71	284.67	283.82	285.32	287.41	288.17	289.87	290.12
37.50°	277.94	280.72	279.50	279.76	279.16	276.00	275.11	271.80	272.72	270.11	271.76	270.58	272.33	275.08	275.72	277.46	277.94
40.00°	264.43	266.90	265.96	266.34	265.43	262.32	261.58	257.98	259.03	256.15	258.11	256.66	258.53	261.72	262.23	263.90	264.43
42.50°	250.25	252.60	251.29	251.94	250.88	247.91	246.77	243.32	243.30	242.06	242.38	242.31	244.43	246.63	248.26	249.65	250.25
45.00°	233.17	237.88	233.96	236.98	235.61	229.31	231.01	224.10	226.20	221.88	225.52	223.03	225.21	230.53	230.23	235.08	233.17
47.50°	214.74	218.05	215.05	215.57	214.77	208.41	208.79	201.85	203.15	199.64	202.86	200.93	204.26	209.08	210.49	214.37	214.74
50.00°	190.57	193.94	190.71	190.80	189.30	182.53	182.12	175.59	176.32	173.37	177.27	175.74	178.31	184.71	185.73	190.93	190.57
52.50°	163.93	167.96	163.34	163.68	162.17	154.10	154.35	146.86	148.43	145.87	149.84	148.92	150.81	158.22	158.99	164.90	163.93
55.00°	137.36	140.52	136.60	135.43	133.74	126.73	125.86	119.53	119.92	119.51	121.54	122.71	124.83	130.66	132.53	137.81	137.36
57.50°	110.83	114.97	110.17	109.59	107.71	99.87	100.49	93.01	95.20	93.48	97.37	96.79	99.27	106.10	106.16	112.95	110.83
60.00°	88.42	90.83	87.57	84.85	83.41	78.20	76.99	72.28	72.58	73.43	74.99	76.38	78.88	82.95	84.75	88.95	88.42
62.50°	67.53	71.10	66.79	66.73	64.76	58.83	59.56	54.65	56.43	54.89	58.88	58.50	59.80	65.78	64.98	70.62	67.53
65.00°	53.67	54.39	52.50	51.36	49.96	46.13	45.54	42.55	43.60	43.34	45.28	46.17	47.80	51.21	52.04	54.27	53.67
67.50°	42.20	42.62	41.08	40.07	38.96	36.16	35.34	33.21	33.68	33.40	35.47	36.20	37.44	40.85	41.16	43.20	42.20
70.00°	33.23	34.01	32.20	30.35	30.40	27.94	27.14	25.34	25.16	25.87	27.06	28.26	29.59	32.19	32.29	33.83	33.23
72.50°	25.04	26.36	24.35	23.15	23.19	20.39	20.45	18.16	18.61	18.83	20.45	21.11	22.26	24.65	23.97	26.28	25.04
75.00°	18.76	19.29	18.10	16.86	16.78	14.77	14.48	13.06	12.93	13.72	14.46	15.41	16.52	17.52	17.98	19.28	18.76
77.50°	13.03	13.93	12.45	11.95	11.91	9.83	9.90	8.85	8.75	8.95	9.98	10.22	11.07	12.46	12.59	14.10	13.03
80.00°	8.88	9.54	8.54	7.50	7.90	6.52	5.95	5.79	5.17	5.87	5.98	6.67	7.44	8.10	8.79	9.40	8.88
82.50°	5.14	6.28	5.24	4.82	4.90	3.72	3.70	3.17	3.17	3.05	3.65	3.66	4.11	5.34	5.35	6.17	5.14
85.00°	3.13	3.60	3.27	2.67	2.42	2.30	2.16	1.95	1.76	2.01	1.81	2.22	2.65	3.06	3.33	3.30	3.13
87.50°	1.52	2.16	1.73	1.67	1.37	1.28	1.45	1.25	1.26	1.22	1.28	1.25	1.46	1.95	1.58	2.06	1.52
90.00°	1.15	1.33	1.21	1.00	1.00	1.00	1.08	1.03	1.08	1.06	1.09	1.09	1.23	1.15	1.23	1.18	1.15
92.50°	1.04	1.04	1.00	0.96	1.00	0.92	1.10	0.98	0.99	0.97	0.98	1.15	1.11	0.97	1.11	1.02	1.04
95.00°	1.03	0.99	1.06	1.07	1.18	1.02	1.26	0.98	0.93	0.92	0.88	1.07	1.00	0.95	1.08	1.00	1.03
97.50°	1.03	1.02	1.20	1.01	1.12	1.16	1.16	0.99	0.93	0.88	0.91	0.97	0.89	1.10	1.06	0.99	1.03
100.00°	1.08	1.09	1.17	0.90	0.96	1.15	0.98	0.99	0.95	0.90	0.97	0.93	0.94	1.29	1.12	0.99	1.08
102.50°	1.15	1.09	1.11	0.94	0.91	1.12	0.99	0.99	1.01	0.92	1.02	0.91	1.01	1.15	1.19	1.00	1.15
105.00°	1.15	1.05	1.15	1.00	0.90	1.06	1.07	1.00	1.08	0.90	1.07	0.94	1.07	0.94	1.13	1.02	1.15

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	997	997	997	997	973	973	973	973	928	928	928	887	887	887	850	850	832
	1	928	896	867	840	906	877	850	826	840	819	799	807	790	774	777	763	747
	2	857	799	752	711	836	784	740	702	754	717	685	726	696	669	701	676	661
	3	791	715	656	609	771	702	647	603	677	630	592	654	614	581	632	599	586
	4	731	642	577	528	712	631	571	524	610	558	516	591	546	509	573	534	522
	5	676	580	512	462	659	570	507	460	553	497	454	536	487	449	521	478	468
	6	628	526	458	409	612	518	454	407	503	446	403	489	438	399	476	431	422
	7	584	480	412	365	570	473	409	364	460	403	361	448	396	358	437	390	383
	8	545	440	374	328	532	434	371	327	423	366	325	412	361	323	403	356	349
	9	510	405	341	297	499	400	339	296	390	334	295	381	330	293	373	326	320
	10	479	375	312	271	469	370	311	270	362	307	269	354	303	267	347	300	295

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	13.7 fc	12.1 ft
6.5 ft	9.8 fc	14.3 ft
7.5 ft	7.3 fc	16.5 ft
8.0 ft	6.5 fc	17.6 ft
10.0 ft	4.1 fc	22.0 ft
12.0 ft	2.9 fc	26.4 ft
14.0 ft	2.1 fc	30.8 ft
16.0 ft	1.6 fc	35.2 ft
20.0 ft	1.0 fc	44.0 ft
24.0 ft	0.7 fc	52.8 ft
28.0 ft	0.5 fc	61.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1415	1415	1415
45.00°	1130	1134	1142
55.00°	821	816	799
65.00°	435	426	405
75.00°	248	240	222
85.00°	123	129	95

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	9.6	11.1	10.0	11.4	11.7	8.7	10.2	9.1	10.5	10.8
	3H	10.2	11.5	10.6	11.9	12.2	9.3	10.6	9.7	10.9	11.3
	4H	10.4	11.6	10.8	11.9	12.3	9.4	10.6	9.8	11.0	11.4
	6H	10.4	11.5	10.9	11.9	12.3	9.5	10.6	9.9	11.0	11.4
	8H	10.4	11.5	10.9	11.9	12.3	9.5	10.5	9.9	10.9	11.3
	12H	10.4	11.4	10.9	11.8	12.3	9.4	10.5	9.9	10.9	11.3
4H	2H	9.8	11.0	10.2	11.4	11.8	8.9	10.1	9.3	10.4	10.8
	3H	10.5	11.5	11.0	11.9	12.4	9.6	10.6	10.0	11.0	11.4
	4H	10.8	11.6	11.2	12.1	12.5	9.8	10.6	10.2	11.1	11.5
	6H	10.9	11.6	11.3	12.1	12.6	9.9	10.6	10.3	11.1	11.6
	8H	10.9	11.6	11.4	12.0	12.5	9.9	10.6	10.3	11.0	11.5
	12H	10.9	11.5	11.4	12.0	12.5	9.8	10.5	10.3	11.0	11.5
8H	4H	10.8	11.5	11.2	11.9	12.4	9.8	10.5	10.2	10.9	11.4
	6H	10.9	11.5	11.4	12.0	12.5	9.9	10.4	10.4	11.0	11.5
	8H	10.9	11.5	11.5	12.0	12.5	9.9	10.4	10.4	10.9	11.4
	12H	11.0	11.4	11.5	11.9	12.5	9.9	10.3	10.4	10.8	11.4
12H	4H	10.7	11.4	11.2	11.9	12.4	9.7	10.4	10.2	10.9	11.3
	6H	10.9	11.4	11.4	11.9	12.5	9.8	10.4	10.4	10.8	11.4
	8H	10.9	11.4	11.5	11.9	12.5	9.8	10.3	10.4	10.8	11.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0