

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

SN32 MED xx xx MWI A19 Opal
32" x 11" Spin Pendant Medium Base E26 MWI

Test Number

SP-01616_1

Test Date

12/18/2023

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

Summary of Results

Power

Input Watts	10.8 W
-------------	--------

Lumen Output

Output Lumens	1097
Efficacy	101.53 lm/W

Luminous Dimensions

0° - 180° Size	-2.67
90° - 270° Size	-2.67
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.24
Two luminaires, plane 90°	1.24
Four luminaires	1.39

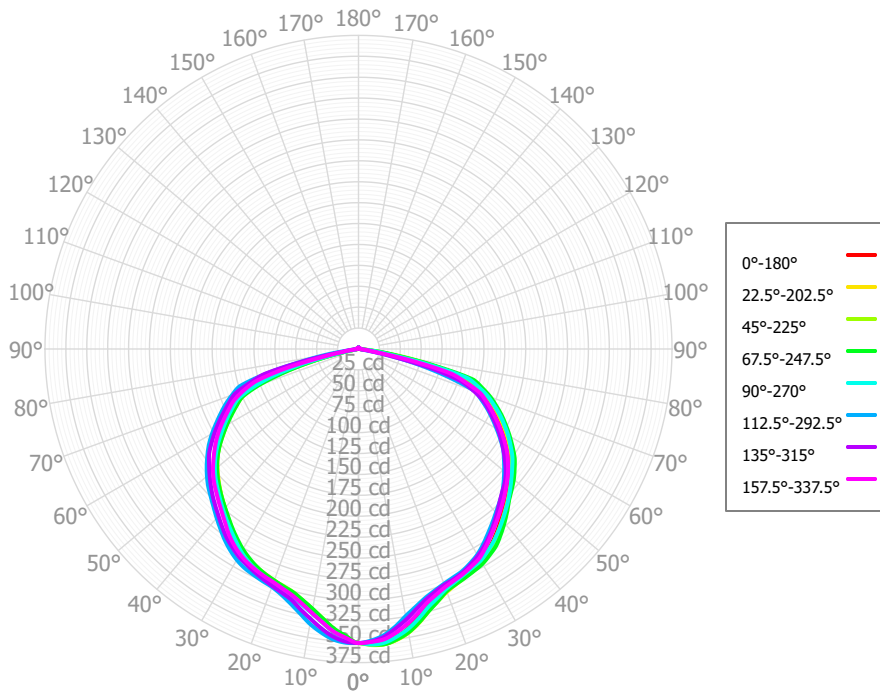
Full Beam Angle

0° - 180°	128°
90° - 270°	129°

IES File Header Contents

Keyword	Value
TEST	SP-01616_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	12/18/2023
ISSUEDATE	12/20/2023
LUMCAT	SN32 MED xx xx MWI A19 Opal
LUMINAIRE	32" x 11" Spin Pendant Medium Base E26 MWI
OTHER	Beam Angle: 129 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°	32.90	3.00%	90.00° - 100.00°	1.66	0.15%
10.00° - 20.00°	88.32	8.05%	100.00° - 110.00°	1.62	0.15%
20.00° - 30.00°	135.99	12.40%	100.00° - 120.00°	3.09	0.28%
30.00° - 40.00°	171.19	15.61%	120.00° - 130.00°	1.37	0.12%
40.00° - 50.00°	189.20	17.25%	130.00° - 140.00°	1.20	0.11%
50.00° - 60.00°	191.48	17.46%	140.00° - 150.00°	0.98	0.09%
60.00° - 70.00°	172.57	15.74%	150.00° - 160.00°	0.72	0.07%
70.00° - 80.00°	98.02	8.94%	160.00° - 170.00°	0.44	0.04%
80.00° - 90.00°	7.28	0.66%	170.00° - 180.00°	0.15	0.01%
0.00° - 90.00°	1086.95	99.12%	0.00° - 180.00°	1096.55	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°	351.70	351.70	351.70	351.70	351.70	351.70	351.70	351.70	351.70	351.70	351.70	351.70	351.70	351.70	351.70	351.70	351.70
2.50°	352.93	353.48	354.48	353.29	353.76	351.64	350.38	345.84	346.98	344.45	345.74	343.72	346.95	349.07	350.29	350.68	352.93
5.00°	351.66	354.24	354.49	354.51	352.74	348.67	345.44	339.47	339.44	336.25	337.08	335.82	339.88	343.86	345.78	348.64	351.66
7.50°	347.14	350.86	350.65	350.35	347.27	342.05	337.37	329.83	329.65	325.39	326.98	325.33	330.09	335.18	337.44	342.28	347.14
10.00°	339.80	344.58	344.36	344.17	340.23	333.93	328.12	320.60	318.53	316.00	316.13	315.70	320.95	324.48	328.64	334.16	339.80
12.50°	328.69	335.41	334.35	334.91	330.60	323.80	319.23	312.16	310.12	308.26	308.05	307.82	313.22	315.85	318.88	324.70	328.69
15.00°	318.99	324.40	324.38	324.62	320.16	315.00	310.46	305.20	303.16	302.34	301.25	301.49	306.50	308.33	310.48	314.75	318.99
17.50°	311.01	316.04	314.48	316.19	312.55	307.83	305.48	300.76	298.96	298.31	297.49	297.99	301.77	303.05	304.56	308.34	311.01
20.00°	305.14	309.22	307.23	308.32	305.73	302.85	301.64	297.02	296.11	294.66	295.02	294.62	297.66	298.88	300.06	303.10	305.14
22.50°	301.63	304.67	303.40	304.53	301.48	300.35	297.98	294.37	293.31	291.36	292.49	291.44	294.65	295.82	297.91	299.58	301.63
25.00°	298.61	301.33	300.53	301.85	297.87	297.83	294.36	291.39	290.53	287.99	289.94	287.50	290.95	293.27	294.91	296.58	298.61
27.50°	296.09	297.87	298.81	299.25	294.98	295.30	290.48	287.93	285.99	284.56	284.93	282.42	286.11	289.03	290.56	292.90	296.09
30.00°	292.13	294.35	295.39	296.66	292.23	291.18	286.54	283.41	280.74	278.71	279.06	276.56	280.26	284.10	285.53	289.04	292.13
32.50°	286.78	288.63	290.12	292.10	287.07	285.51	281.02	277.48	273.86	270.88	271.59	269.59	272.87	277.28	279.55	282.20	286.78
35.00°	280.40	281.92	283.87	287.14	281.44	278.85	275.17	270.44	266.37	263.16	263.62	262.46	265.66	269.77	272.81	274.67	280.40
37.50°	273.11	274.76	276.63	279.57	274.69	271.29	267.98	262.04	258.46	255.51	255.97	255.09	258.70	262.64	265.08	267.60	273.11
40.00°	265.15	267.43	269.22	271.53	267.74	263.87	260.55	254.37	250.41	248.48	248.42	248.16	251.75	255.64	257.34	260.63	265.15
42.50°	256.63	260.25	261.67	263.23	260.72	256.56	253.71	247.54	243.86	241.88	241.54	241.77	244.82	249.28	249.56	253.84	256.63
45.00°	249.06	253.11	254.31	254.88	253.69	249.90	246.97	240.93	237.76	234.87	234.82	235.18	238.07	243.09	242.78	247.07	249.06
47.50°	242.20	245.95	247.12	248.58	246.30	243.74	239.83	234.55	231.21	227.60	228.08	228.36	231.56	235.45	237.11	240.19	242.20
50.00°	235.11	238.77	239.91	242.53	238.87	236.61	232.65	227.15	224.55	220.21	221.34	220.79	224.23	227.43	229.84	233.28	235.11
52.50°	227.85	231.04	232.68	235.35	231.76	228.81	225.37	218.79	216.30	212.75	212.56	212.43	216.02	219.41	220.90	225.33	227.85
55.00°	219.62	223.15	224.66	228.07	224.68	220.55	218.07	210.20	207.68	203.19	203.40	202.95	206.81	211.39	211.75	217.26	219.62
57.50°	210.78	214.05	216.04	218.56	215.76	211.99	208.26	201.41	197.87	192.50	193.39	192.41	196.61	201.26	202.39	207.37	210.78
60.00°	200.79	204.64	206.59	208.89	206.73	202.21	198.26	191.72	187.83	182.29	183.24	181.87	186.48	190.71	192.51	197.30	200.79
62.50°	190.13	194.61	196.56	199.09	196.73	191.71	187.80	181.29	177.68	172.32	172.87	171.33	176.40	180.44	182.18	186.93	190.13
65.00°	179.69	184.45	186.35	189.29	186.68	181.63	177.30	171.21	167.51	162.28	162.47	161.12	166.30	170.22	171.81	176.55	179.69
67.50°	169.36	173.94	176.02	178.63	175.50	171.78	167.41	161.40	157.28	152.22	150.96	151.17	156.20	159.26	161.42	165.98	169.36
70.00°	158.15	163.36	164.96	167.95	164.29	160.91	157.55	146.97	147.05	131.80	139.34	127.47	135.68	148.19	146.69	155.40	158.15
72.50°	146.52	149.21	153.50	155.37	150.21	149.54	137.79	129.34	115.46	107.16	98.60	93.51	107.02	115.25	128.75	135.87	146.52
75.00°	114.12	134.43	126.30	142.43	135.33	115.18	117.67	92.20	81.30	67.46	55.48	57.55	69.69	79.71	91.51	116.08	114.12
77.50°	72.42	89.05	90.96	95.51	84.85	70.47	67.66	42.66	44.71	22.24	29.52	20.21	26.14	44.15	41.10	66.42	72.42
80.00°	40.16	39.13	54.23	49.28	35.78	38.38	18.88	17.57	7.90	7.65	4.56	4.59	6.80	8.57	15.83	16.98	40.16
82.50°	11.74	19.82	16.83	25.91	19.04	11.44	10.40	6.68	3.72	3.21	2.66	2.64	3.46	4.43	6.39	9.73	11.74
85.00°	3.17	4.22	4.31	3.69	3.27	3.36	2.31	2.45	1.88	1.90	1.61	1.80	1.91	2.55	2.61	2.68	3.17
87.50°	1.95	2.23	2.48	2.86	2.45	2.25	1.88	1.78	1.57	1.52	1.49	1.59	1.45	2.04	2.09	2.08	1.95
90.00°	1.60	1.56	1.77	2.07	1.70	1.86	1.48	1.54	1.32	1.41	1.38	1.50	1.31	1.60	1.81	1.50	1.60
92.50°	1.55	1.52	1.50	1.81	1.65	1.71	1.48	1.49	1.24	1.38	1.40	1.48	1.35	1.62	1.66	1.47	1.55
95.00°	1.63	1.53	1.41	1.58	1.60	1.61	1.47	1.48	1.15	1.39	1.41	1.45	1.45	1.65	1.63	1.45	1.63
97.50°	1.75	1.51	1.38	1.63	1.63	1.53	1.35	1.49	1.20	1.41	1.48	1.41	1.58	1.70	1.65	1.47	1.75
100.00°	1.69	1.50	1.42	1.68	1.64	1.61	1.26	1.49	1.24	1.40	1.54	1.43	1.61	1.76	1.66	1.50	1.69
102.50°	1.59	1.51	1.49	1.65	1.60	1.74	1.33	1.50	1.39	1.38	1.47	1.48	1.59	1.71	1.66	1.60	1.59
105.00°	1.54	1.52	1.49	1.62	1.56	1.68	1.40	1.44	1.54	1.38	1.41	1.53	1.57	1.68	1.61	1.69	1.54

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%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	1303	1303	1303	1303	1272	1272	1272	1272	1213	1213	1213	1159	1159	1159	1110	1110	1110	1087
	1	1186	1132	1083	1040	1155	1106	1062	1022	1057	1021	987	1013	983	955	971	948	925	926
	2	1070	975	896	830	1039	953	880	819	912	851	798	874	823	778	839	797	759	778
	3	968	847	752	677	940	828	741	670	794	719	657	761	698	644	732	678	631	662
	4	882	743	642	565	855	728	633	560	699	616	551	671	600	542	646	585	534	571
	5	807	660	556	480	783	646	550	477	622	536	471	598	523	464	577	511	458	499
	6	743	591	488	415	721	579	483	413	558	472	408	538	462	403	520	452	399	442
	7	687	533	433	363	667	524	429	362	506	420	358	489	412	355	473	404	351	395
	8	639	485	388	322	620	477	385	320	461	377	318	446	371	315	433	364	312	356
	9	596	444	351	288	579	437	348	287	423	342	285	411	336	283	399	331	281	324
	10	558	409	319	260	543	403	317	259	391	312	257	380	307	256	369	302	254	296

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	11.6 fc	22.7 ft
6.5 ft	8.3 fc	26.9 ft
7.5 ft	6.3 fc	31.0 ft
8.0 ft	5.5 fc	33.1 ft
10.0 ft	3.5 fc	41.3 ft
12.0 ft	2.4 fc	49.6 ft
14.0 ft	1.8 fc	57.9 ft
16.0 ft	1.4 fc	66.1 ft
20.0 ft	0.9 fc	82.7 ft
24.0 ft	0.6 fc	99.2 ft
28.0 ft	0.4 fc	115.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	676	676	676
45.00°	677	691	690
55.00°	736	753	753
65.00°	817	848	849
75.00°	848	938	1005
85.00°	70	95	72

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	10.8	12.5	11.2	12.8	13.1	10.5	12.2	10.9	12.5	12.9
	3H	13.4	14.9	13.8	15.2	15.6	13.1	14.6	13.5	14.9	15.3
	4H	14.4	15.9	14.8	16.2	16.6	13.9	15.4	14.3	15.7	16.1
	6H	14.8	16.1	15.2	16.5	16.9	14.2	15.5	14.6	15.9	16.3
	8H	14.8	16.0	15.2	16.5	16.9	14.2	15.4	14.6	15.9	16.3
	12H	14.7	16.0	15.2	16.4	16.8	14.1	15.4	14.6	15.8	16.2
4H	2H	11.6	13.1	12.0	13.4	13.8	11.3	12.8	11.7	13.1	13.5
	3H	14.5	15.7	14.9	16.1	16.5	14.1	15.3	14.5	15.7	16.1
	4H	15.6	16.7	16.1	17.2	17.6	15.0	16.1	15.4	16.5	17.0
	6H	16.0	17.0	16.5	17.5	17.9	15.2	16.2	15.7	16.7	17.1
	8H	16.0	16.9	16.5	17.4	17.9	15.2	16.1	15.7	16.6	17.1
	12H	16.0	16.8	16.5	17.3	17.8	15.2	16.0	15.7	16.5	17.0
8H	4H	16.0	16.9	16.5	17.3	17.8	15.2	16.1	15.7	16.6	17.0
	6H	16.4	17.1	16.9	17.6	18.1	15.5	16.2	16.0	16.7	17.2
	8H	16.4	17.1	16.9	17.6	18.1	15.5	16.2	16.0	16.7	17.2
	12H	16.4	17.0	16.9	17.5	18.1	15.5	16.1	16.0	16.6	17.2
12H	4H	16.0	16.8	16.5	17.3	17.8	15.2	16.0	15.7	16.5	17.0
	6H	16.4	17.1	16.9	17.5	18.1	15.5	16.1	16.0	16.6	17.2
	8H	16.4	17.0	17.0	17.5	18.1	15.5	16.1	16.0	16.6	17.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0