

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

SN32 10L 30HK xx xx xx MWI
32" x 11" Spin Pendant 30L 30HK MWI

Test Number

SP-01614

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
-------------	-------

Lumen Output

Output Lumens	1022
Efficacy	117.48 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.32
Two luminaires, plane 90°	1.31
Four luminaires	1.45

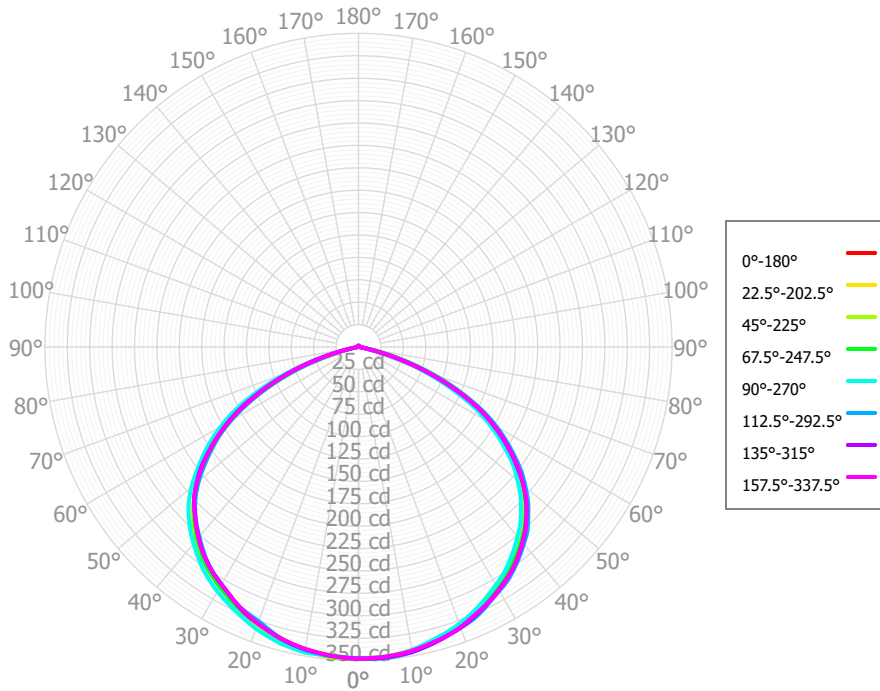
Full Beam Angle

0° - 180°	119°
90° - 270°	119°

IES File Header Contents

Keyword	Value
TEST	SP-01614
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/8/2023
ISSUEDATE	11/10/2023
LUMCAT	SN32 10L 30HK xx xx xx MWI
LUMINAIRE	32" x 11" Spin Pendant 30L 30HK MWI
OTHER	Beam Angle: 119 deg
OTHER	90 CRI, 3000K tested
OTHER	CCT Output Multipliers: 27HK x 0.99, 35HK x 1.01
OTHER	Total luminaire wattages are approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	90+

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	33.52	3.28%	90.00° - 100.00°	1.26	0.12%
10.00° - 20.00°	95.45	9.34%	100.00° - 110.00°	1.23	0.12%
20.00° - 30.00°	148.10	14.49%	100.00° - 120.00°	2.41	0.24%
30.00° - 40.00°	185.98	18.20%	120.00° - 130.00°	1.05	0.10%
40.00° - 50.00°	201.72	19.74%	130.00° - 140.00°	0.96	0.09%
50.00° - 60.00°	183.95	18.00%	140.00° - 150.00°	0.75	0.07%
60.00° - 70.00°	125.36	12.27%	150.00° - 160.00°	0.58	0.06%
70.00° - 80.00°	38.07	3.72%	160.00° - 170.00°	0.35	0.03%
80.00° - 90.00°	2.41	0.24%	170.00° - 180.00°	0.12	0.01%
0.00° - 90.00°	1014.57	99.27%	0.00° - 180.00°	1022.04	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°	347.93	347.93	347.93	347.93	347.93	347.93	347.93	347.93	347.93	347.93	347.93	347.93	347.93	347.93	347.93	347.93	347.93
2.50°	348.33	348.32	347.06	347.46	348.43	346.69	347.26	347.17	348.08	346.66	347.81	347.25	347.48	348.35	348.10	347.56	348.33
5.00°	347.51	347.76	346.92	346.98	347.80	345.95	346.14	346.10	347.10	345.29	347.72	346.88	346.07	348.59	347.96	346.96	347.51
7.50°	345.63	345.87	345.28	346.03	345.98	344.80	344.46	344.18	345.73	343.93	346.02	345.35	345.97	347.56	346.97	345.84	345.63
10.00°	343.70	343.73	343.42	344.04	343.46	343.55	342.47	342.18	343.76	342.57	343.81	343.20	346.12	345.81	345.65	344.29	343.70
12.50°	341.16	341.39	340.94	341.28	339.81	340.12	340.16	339.53	339.97	339.70	340.68	340.49	344.10	343.05	343.07	341.79	341.16
15.00°	338.47	338.57	338.38	338.26	336.28	336.45	336.82	336.78	336.37	336.37	337.39	337.57	341.90	339.89	340.17	339.21	338.47
17.50°	334.78	335.44	334.55	335.09	332.89	331.09	332.76	332.70	333.17	332.24	333.89	332.84	338.33	336.31	336.94	336.49	334.78
20.00°	330.90	331.52	330.61	330.88	328.84	325.77	328.64	328.47	329.45	327.95	329.86	327.65	334.67	333.22	333.66	332.77	330.90
22.50°	326.35	327.26	325.67	326.29	324.22	322.18	324.49	323.31	324.98	323.81	325.33	323.94	329.93	330.51	328.95	327.90	326.35
25.00°	321.90	322.54	320.63	321.56	318.74	318.23	318.48	317.95	319.95	319.69	320.20	320.43	325.16	325.69	324.15	323.32	321.90
27.50°	317.71	317.69	315.16	316.80	312.72	311.91	311.84	311.94	314.32	314.26	314.66	315.05	320.23	319.68	318.60	318.99	317.71
30.00°	312.43	311.49	309.56	311.25	306.66	305.73	306.13	306.07	308.16	308.74	309.15	309.56	315.08	314.46	313.03	313.61	312.43
32.50°	305.21	305.04	303.59	305.59	300.59	300.09	300.62	300.54	301.58	302.04	303.68	303.38	309.18	309.56	307.31	307.60	305.21
35.00°	298.21	298.23	297.22	298.25	292.97	293.63	293.69	294.19	294.70	295.25	297.29	296.95	302.66	302.64	301.17	300.78	298.21
37.50°	291.47	291.39	290.06	290.82	284.88	285.07	286.59	286.47	287.63	288.00	290.58	288.51	294.76	295.20	293.14	293.61	291.47
40.00°	283.49	283.71	281.94	282.74	276.23	276.43	277.55	277.93	279.28	280.10	282.16	279.81	286.54	287.16	284.78	285.09	283.49
42.50°	274.35	275.79	272.45	274.39	267.47	267.64	268.43	268.40	270.40	270.02	273.34	269.98	277.81	279.03	275.46	276.19	274.35
45.00°	263.70	264.87	262.24	264.00	256.41	257.82	258.79	258.70	259.81	259.41	261.46	259.38	268.02	268.03	265.34	265.35	263.70
47.50°	252.01	253.57	251.26	253.12	245.14	246.65	248.72	248.86	248.76	247.59	249.22	246.63	257.00	256.81	253.63	254.19	252.01
50.00°	238.72	240.07	238.37	240.25	231.70	233.03	235.71	235.71	235.23	234.28	235.46	232.79	243.49	243.40	240.34	240.33	238.72
52.50°	224.63	225.85	224.00	226.58	218.01	217.06	221.82	220.39	221.32	218.56	221.53	216.82	227.89	229.66	224.77	226.25	224.63
55.00°	208.59	209.16	208.23	210.78	201.16	201.01	204.47	203.99	205.56	202.50	204.96	200.55	211.88	212.95	208.58	209.66	208.59
57.50°	191.89	192.23	191.68	194.25	184.04	184.91	186.81	187.08	189.61	186.04	188.11	183.86	195.63	196.02	191.71	192.91	191.89
60.00°	172.61	174.77	174.00	176.38	165.37	164.93	168.34	167.19	170.01	167.14	169.21	164.67	177.36	178.06	173.41	174.22	172.61
62.50°	152.77	155.42	155.87	156.77	145.49	143.00	148.30	146.33	150.07	146.14	149.27	142.88	158.19	158.59	153.98	154.71	152.77
65.00°	128.63	132.97	132.34	134.83	121.39	120.28	125.43	123.61	126.95	123.66	125.22	119.43	135.01	134.65	130.76	130.91	128.63
67.50°	104.00	109.19	107.39	111.67	97.49	97.28	102.29	100.51	103.56	100.23	100.93	94.71	110.64	110.16	105.39	106.84	104.00
70.00°	79.39	83.84	83.00	87.32	74.04	72.84	78.79	77.37	78.87	75.98	75.97	70.45	84.96	84.56	80.25	81.86	79.39
72.50°	54.89	59.46	58.69	63.62	51.03	48.07	55.75	54.23	54.91	51.36	51.94	46.43	59.03	59.69	55.22	57.21	54.89
75.00°	32.49	35.91	35.96	40.40	28.76	28.32	33.14	32.93	33.18	30.49	29.61	27.02	36.91	35.91	33.12	33.28	32.49
77.50°	12.28	18.99	13.71	22.59	13.23	9.17	17.33	12.65	15.75	10.77	13.60	9.38	15.10	18.42	11.80	15.24	12.28
80.00°	6.63	6.25	7.55	7.62	5.79	5.15	6.32	6.97	7.22	5.21	5.98	4.28	8.34	7.65	5.74	6.46	6.63
82.50°	2.08	2.08	1.97	2.86	2.05	1.76	2.21	2.01	1.93	2.28	2.04	2.36	2.08	2.55	1.97	1.61	2.08
85.00°	1.75	1.79	1.60	1.82	1.61	1.54	1.61	1.52	1.41	1.63	1.67	1.67	1.65	1.89	1.57	1.25	1.75
87.50°	1.46	1.51	1.28	1.50	1.37	1.34	1.32	1.17	1.15	1.17	1.51	1.15	1.28	1.43	1.37	0.99	1.46
90.00°	1.28	1.22	1.22	1.35	1.26	1.19	1.13	1.30	1.17	1.11	1.50	1.13	1.21	1.09	1.18	0.82	1.28
92.50°	1.13	1.11	1.22	1.27	1.15	1.08	1.11	1.34	1.15	1.06	1.33	1.14	1.13	1.10	1.04	0.87	1.13
95.00°	1.05	1.03	1.37	1.21	1.03	1.12	1.13	1.16	1.12	1.04	1.07	1.26	1.03	1.24	1.30	1.04	1.05
97.50°	1.08	1.29	1.44	1.07	1.06	1.19	1.03	1.05	1.04	1.04	1.00	1.35	1.00	1.31	1.47	1.10	1.08
100.00°	1.23	1.58	1.34	0.95	1.13	1.39	0.91	1.04	0.95	1.12	0.99	1.24	1.13	1.37	1.26	1.11	1.23
102.50°	1.24	1.26	1.30	1.08	1.21	1.45	0.98	1.03	0.94	1.18	1.14	1.16	1.20	1.29	1.12	1.04	1.24
105.00°	1.14	0.97	1.32	1.21	1.28	1.29	1.05	1.01	0.97	1.11	1.34	1.23	1.16	1.20	1.20	0.96	1.14

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	1215	1215	1215	1215	1186	1186	1186	1186	1131	1131	1131	1082	1082	1082	1036	1036	1015
	1	1121	1076	1037	1001	1093	1053	1017	984	1008	979	952	967	943	921	930	911	891
	2	1022	943	877	822	995	923	863	812	886	835	792	852	810	773	820	786	768
	3	933	829	749	685	907	812	738	678	781	718	666	752	698	653	726	680	665
	4	853	734	646	580	829	720	638	575	693	623	566	669	608	558	646	593	580
	5	783	654	564	498	762	642	558	494	620	545	488	599	534	482	580	522	511
	6	722	588	497	433	702	578	492	430	559	483	426	541	473	422	524	464	454
	7	669	532	443	380	651	523	439	379	507	431	375	491	423	372	477	416	407
	8	622	484	397	338	605	477	394	337	463	388	334	449	381	332	437	375	368
	9	580	443	360	303	565	437	357	302	425	351	300	413	346	298	402	341	335
	10	543	408	328	274	530	403	325	273	392	321	271	382	316	270	372	312	306

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	11.5 fc	18.8 ft
6.5 ft	8.2 fc	22.2 ft
7.5 ft	6.2 fc	25.6 ft
8.0 ft	5.4 fc	27.3 ft
10.0 ft	3.5 fc	34.1 ft
12.0 ft	2.4 fc	40.9 ft
14.0 ft	1.8 fc	47.8 ft
16.0 ft	1.4 fc	54.6 ft
20.0 ft	0.9 fc	68.2 ft
24.0 ft	0.6 fc	81.9 ft
28.0 ft	0.4 fc	95.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	669	669	669
45.00°	717	713	697
55.00°	699	698	674
65.00°	585	602	552
75.00°	241	267	214
85.00°	39	35	36

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	10.5	12.1	10.9	12.4	12.7	10.2	11.8	10.6	12.1	12.5
	3H	11.7	13.2	12.1	13.5	13.9	11.4	12.8	11.8	13.2	13.6
	4H	11.9	13.2	12.3	13.6	14.0	11.6	12.9	12.0	13.3	13.7
	6H	11.9	13.1	12.3	13.5	13.9	11.5	12.8	12.0	13.2	13.6
	8H	11.8	13.0	12.3	13.4	13.8	11.5	12.7	11.9	13.1	13.5
	12H	11.8	12.9	12.3	13.3	13.8	11.5	12.6	11.9	13.0	13.5
4H	2H	11.0	12.4	11.4	12.7	13.1	10.8	12.1	11.2	12.5	12.9
	3H	12.4	13.5	12.8	13.9	14.3	12.0	13.1	12.4	13.5	14.0
	4H	12.6	13.6	13.0	14.0	14.5	12.2	13.2	12.6	13.6	14.1
	6H	12.6	13.4	13.0	13.9	14.4	12.2	13.0	12.6	13.5	14.0
	8H	12.5	13.4	13.0	13.8	14.3	12.1	12.9	12.6	13.4	13.9
	12H	12.5	13.2	13.0	13.7	14.2	12.1	12.8	12.6	13.3	13.8
8H	4H	12.6	13.4	13.1	13.9	14.4	12.2	13.0	12.7	13.5	14.0
	6H	12.6	13.3	13.1	13.8	14.3	12.2	12.9	12.7	13.4	13.8
	8H	12.6	13.2	13.1	13.7	14.2	12.2	12.7	12.7	13.3	13.8
	12H	12.5	13.1	13.1	13.6	14.2	12.1	12.6	12.7	13.2	13.7
12H	4H	12.6	13.3	13.1	13.8	14.3	12.2	12.9	12.7	13.4	13.9
	6H	12.6	13.2	13.1	13.6	14.2	12.2	12.8	12.7	13.2	13.8
	8H	12.6	13.1	13.1	13.6	14.2	12.1	12.6	12.7	13.2	13.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0