

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SN32 30L 30HK xx xx TW FCI
32" x 11" Spin Pendant 30L 30HK TW FCI

Test Number

SP-01615_2

Test Date

11/8/2023

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

Summary of Results

Power

Input Watts	27.8 W
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Lumen Output

Output Lumens	2960
Efficacy	106.46 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.29
Two luminaires, plane 90°	1.3
Four luminaires	1.43

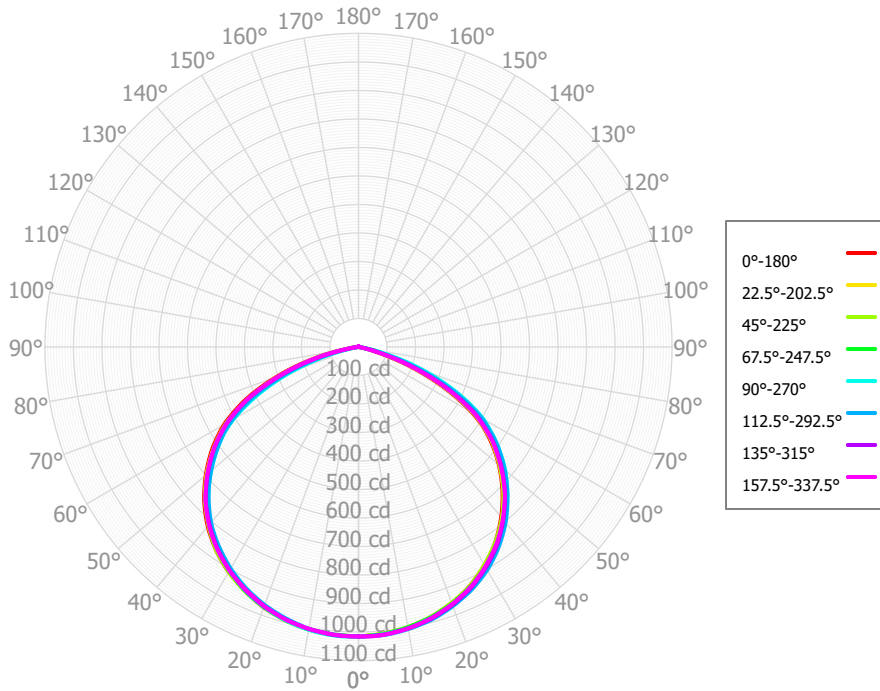
Full Beam Angle

0° - 180°	120°
90° - 270°	120°

IES File Header Contents

Keyword	Value
TEST	SP-01615_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/8/2023
ISSUEDATE	11/10/2023
LUMCAT	SN32 30L 30HK xx xx TW FCI
LUMINAIRE	32" x 11" Spin Pendant 30L 30HK TW FCI
OTHER	Beam Angle: 120 deg
OTHER	90 CRI, 3000K tested
OTHER	Total luminaire wattages are approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	90+
_CCTMULT	27HK x 0.99, 35HK x 1.01
_LAMPMULT	20L x .68, 10L x .34

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	97.80	3.30%	90.00° - 100.00°	1.65	0.06%
10.00° - 20.00°	278.68	9.42%	100.00° - 110.00°	1.58	0.05%
20.00° - 30.00°	430.94	14.56%	100.00° - 120.00°	3.11	0.11%
30.00° - 40.00°	534.06	18.04%	120.00° - 130.00°	1.41	0.05%
40.00° - 50.00°	570.84	19.29%	130.00° - 140.00°	1.26	0.04%
50.00° - 60.00°	529.12	17.88%	140.00° - 150.00°	1.00	0.03%
60.00° - 70.00°	373.05	12.60%	150.00° - 160.00°	0.74	0.02%
70.00° - 80.00°	126.45	4.27%	160.00° - 170.00°	0.47	0.02%
80.00° - 90.00°	8.98	0.30%	170.00° - 180.00°	0.16	0.01%
0.00° - 90.00°	2949.92	99.67%	0.00° - 180.00°	2959.71	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°	1015.62	1015.62	1015.62	1015.62	1015.62	1015.62	1015.62	1015.62	1015.62	1015.62	1015.62	1015.62	1015.62	1015.62	1015.62	1015.62	1015.62
2.50°	1013.30	1012.28	1012.36	1013.35	1014.46	1014.27	1015.30	1015.39	1014.40	1014.69	1014.18	1014.60	1016.84	1015.34	1014.75	1016.35	1013.30
5.00°	1011.04	1009.57	1009.60	1010.62	1011.66	1012.32	1014.12	1012.72	1013.58	1014.08	1013.36	1013.34	1015.74	1014.44	1012.98	1013.83	1011.04
7.50°	1006.86	1004.25	1004.21	1004.84	1007.41	1008.91	1009.26	1008.75	1010.20	1009.48	1010.37	1010.24	1012.00	1010.40	1007.68	1008.94	1006.86
10.00°	1000.83	998.58	998.11	998.46	1002.40	1003.81	1004.36	1003.99	1005.57	1004.52	1006.82	1006.32	1007.15	1005.12	1002.30	1003.09	1000.83
12.50°	991.43	990.42	989.63	990.19	994.26	995.05	996.93	997.54	999.23	997.59	1000.32	999.09	1000.45	998.04	994.86	994.48	991.43
15.00°	981.31	981.96	980.19	981.58	984.52	985.62	989.47	989.64	992.11	990.06	993.13	991.27	992.23	990.29	987.18	984.77	981.31
17.50°	969.93	969.49	967.80	970.50	973.49	974.73	979.06	978.82	982.68	979.31	982.59	981.18	981.58	979.47	975.29	972.89	969.93
20.00°	957.05	956.61	954.95	959.00	961.84	962.78	968.58	966.92	972.26	968.26	971.31	970.36	969.95	967.54	963.22	960.19	957.05
22.50°	941.72	942.23	940.76	944.29	947.45	948.70	954.66	952.90	958.43	955.69	958.36	956.86	956.77	953.75	948.25	945.29	941.72
25.00°	924.61	927.70	924.95	929.07	931.77	933.46	940.64	938.31	943.17	942.39	945.07	942.37	941.73	939.34	932.96	929.63	924.61
27.50°	904.63	905.63	904.65	910.11	913.45	915.94	922.69	922.67	927.28	925.62	928.35	924.51	923.95	921.83	913.47	910.21	904.63
30.00°	883.73	882.92	883.66	890.59	893.97	897.13	904.64	905.59	911.15	908.04	910.93	905.98	905.19	903.35	893.71	889.50	883.73
32.50°	861.42	861.34	860.79	868.08	873.02	875.92	883.99	886.00	891.56	886.94	891.01	885.23	885.07	880.90	871.10	866.93	861.42
35.00°	836.73	839.84	836.92	845.18	851.46	853.86	863.17	864.91	870.64	865.44	870.64	863.76	861.98	857.22	847.97	843.75	836.73
37.50°	808.57	812.00	810.48	818.90	825.82	830.34	838.48	841.29	847.05	842.33	844.93	840.08	834.84	830.53	819.50	816.45	808.57
40.00°	779.01	783.76	782.89	792.23	798.51	804.58	813.64	816.18	822.49	818.01	818.35	814.70	806.89	802.97	790.71	787.87	779.01
42.50°	747.46	751.57	752.54	761.85	769.13	774.96	786.32	788.65	794.53	789.03	790.17	784.42	777.89	771.52	759.10	757.05	747.46
45.00°	714.45	719.18	720.45	731.05	738.97	743.88	758.51	759.06	765.41	759.58	761.73	752.97	746.13	738.99	727.03	725.59	714.45
47.50°	679.46	682.75	684.29	695.44	705.82	710.44	724.26	726.23	732.92	728.42	728.21	718.27	710.96	704.30	691.10	689.43	679.46
50.00°	642.80	646.15	647.42	659.38	671.59	675.47	689.88	692.09	699.31	695.82	693.98	682.58	674.78	669.06	654.73	652.01	642.80
52.50°	603.92	607.53	608.97	620.83	633.03	638.17	653.91	656.01	663.54	658.20	656.92	644.33	637.38	630.72	615.21	612.33	603.92
55.00°	561.97	568.86	567.89	582.06	592.96	599.60	617.43	617.85	627.11	619.93	619.48	605.22	598.21	591.64	574.60	572.07	561.97
57.50°	516.15	518.36	521.15	537.16	549.92	559.12	575.58	576.74	586.44	579.56	578.11	563.95	557.00	546.08	526.98	523.01	516.15
60.00°	460.56	467.59	468.13	491.82	505.92	512.54	532.64	531.91	544.49	535.60	536.27	517.99	506.64	499.03	476.82	471.84	460.56
62.50°	393.30	400.70	402.36	429.12	447.51	457.24	479.08	481.91	491.96	480.81	480.38	460.75	445.98	436.29	410.82	406.49	393.30
65.00°	322.97	333.63	335.22	365.42	384.56	396.98	424.06	424.97	436.48	423.54	423.07	400.14	381.57	370.25	343.64	337.85	322.97
67.50°	249.05	261.55	265.46	296.04	316.57	329.80	356.70	358.89	372.09	358.99	356.97	331.87	313.14	299.04	269.88	265.33	249.05
70.00°	177.75	189.52	196.47	226.37	247.10	262.51	289.45	292.35	305.41	293.14	290.03	263.05	242.84	226.83	196.94	191.99	177.75
72.50°	109.36	123.54	128.93	157.90	179.69	195.09	222.96	225.21	238.23	223.73	220.71	193.01	170.64	156.99	128.48	125.83	109.36
75.00°	57.93	58.36	72.15	89.49	112.83	131.16	157.19	159.46	170.93	156.17	151.21	126.99	107.58	87.58	66.26	61.05	57.93
77.50°	24.92	32.62	34.43	51.03	65.46	71.66	96.58	95.41	109.82	93.56	93.23	69.38	53.60	48.54	34.78	31.56	24.92
80.00°	6.74	7.63	9.22	13.32	23.22	31.46	41.72	48.84	50.13	42.86	36.10	26.53	21.49	14.54	8.40	8.64	6.74
82.50°	3.85	4.97	5.66	8.03	10.43	15.09	23.34	22.58	26.05	22.00	19.57	13.74	10.07	6.60	5.01	4.17	3.85
85.00°	2.16	2.39	3.04	3.36	4.83	5.21	7.29	7.11	9.47	6.56	5.43	4.69	3.80	2.80	2.18	2.82	2.16
87.50°	1.64	2.09	1.96	2.52	2.79	2.93	4.60	3.92	4.84	3.89	3.12	2.83	2.31	2.00	1.79	2.23	1.64
90.00°	1.28	1.78	1.30	1.70	1.60	1.63	2.25	2.04	2.63	1.90	1.34	1.59	1.57	1.63	1.53	1.76	1.28
92.50°	1.07	1.54	1.31	1.88	1.41	1.46	1.77	1.58	1.89	1.48	1.36	1.47	1.49	1.60	1.77	1.67	1.07
95.00°	1.08	1.32	1.37	2.05	1.44	1.45	1.35	1.44	1.42	1.18	1.45	1.38	1.51	1.62	1.88	1.64	1.08
97.50°	1.27	1.34	1.50	1.85	1.47	1.64	1.31	1.62	1.28	1.12	1.38	1.35	1.60	1.46	1.49	1.48	1.27
100.00°	1.41	1.37	1.60	1.66	1.51	1.67	1.27	1.67	1.21	1.11	1.31	1.34	1.63	1.29	1.22	1.31	1.41
102.50°	1.50	1.43	1.63	1.64	1.58	1.53	1.26	1.57	1.23	1.21	1.35	1.39	1.61	1.44	1.40	1.38	1.50
105.00°	1.51	1.50	1.70	1.63	1.65	1.55	1.31	1.53	1.28	1.32	1.40	1.43	1.52	1.62	1.57	1.48	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	3521	3521	3521	3521	3438	3438	3438	3438	3283	3283	3283	3141	3141	3141	3011	3011	2950
	1	3244	3114	2997	2893	3164	3046	2940	2845	2920	2833	2753	2803	2733	2668	2696	2640	2583
	2	2957	2725	2533	2372	2879	2668	2492	2343	2563	2414	2287	2465	2342	2233	2375	2273	2182
	3	2696	2394	2160	1974	2623	2347	2130	1955	2258	2072	1920	2176	2018	1885	2099	1966	1852
	4	2467	2119	1864	1670	2398	2079	1841	1657	2004	1797	1633	1934	1755	1610	1869	1715	1588
	5	2265	1890	1627	1433	2203	1856	1609	1425	1792	1575	1408	1733	1542	1392	1677	1510	1376
	6	2089	1698	1435	1247	2032	1669	1421	1241	1615	1394	1229	1564	1367	1217	1517	1342	1206
	7	1935	1536	1278	1097	1883	1512	1267	1093	1465	1245	1084	1422	1223	1075	1381	1203	1067
	8	1799	1399	1148	975	1752	1378	1139	972	1338	1121	965	1301	1103	959	1265	1086	952
	9	1679	1282	1039	875	1636	1264	1031	872	1229	1016	867	1197	1002	862	1166	988	857
	10	1572	1181	947	791	1534	1165	941	789	1135	928	785	1107	916	781	1080	904	777

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	33.6 fc	19.0 ft
6.5 ft	24.0 fc	22.4 ft
7.5 ft	18.1 fc	25.9 ft
8.0 ft	15.9 fc	27.6 ft
10.0 ft	10.2 fc	34.5 ft
12.0 ft	7.1 fc	41.4 ft
14.0 ft	5.2 fc	48.3 ft
16.0 ft	4.0 fc	55.2 ft
20.0 ft	2.5 fc	69.0 ft
24.0 ft	1.8 fc	82.8 ft
28.0 ft	1.3 fc	96.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1952	1952	1952
45.00°	1942	1959	2009
55.00°	1884	1903	1987
65.00°	1469	1525	1749
75.00°	430	536	838
85.00°	48	67	106

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	13.7	15.3	14.1	15.6	16.0	14.2	15.8	14.6	16.2	16.5
	3H	14.7	16.1	15.1	16.4	16.8	15.6	17.0	16.0	17.4	17.7
	4H	14.7	16.1	15.1	16.4	16.8	15.8	17.2	16.2	17.5	17.9
	6H	14.7	15.9	15.1	16.3	16.7	15.8	17.1	16.3	17.5	17.9
	8H	14.7	15.9	15.1	16.2	16.7	15.8	17.0	16.2	17.4	17.8
	12H	14.6	15.8	15.1	16.2	16.6	15.8	16.9	16.2	17.3	17.8
4H	2H	14.2	15.5	14.6	15.9	16.3	14.9	16.3	15.3	16.6	17.0
	3H	15.3	16.4	15.7	16.8	17.2	16.4	17.5	16.8	17.9	18.4
	4H	15.3	16.3	15.8	16.8	17.2	16.7	17.7	17.1	18.1	18.6
	6H	15.3	16.2	15.8	16.6	17.1	16.7	17.6	17.2	18.1	18.5
	8H	15.3	16.1	15.7	16.5	17.0	16.7	17.5	17.2	18.0	18.5
	12H	15.2	16.0	15.7	16.5	16.9	16.7	17.4	17.2	17.9	18.4
8H	4H	15.4	16.2	15.8	16.6	17.1	16.9	17.7	17.3	18.1	18.6
	6H	15.3	16.0	15.8	16.5	17.0	16.9	17.6	17.4	18.1	18.6
	8H	15.3	15.9	15.8	16.4	16.9	16.9	17.5	17.4	18.0	18.5
	12H	15.2	15.8	15.8	16.3	16.8	16.9	17.4	17.4	17.9	18.4
12H	4H	15.3	16.1	15.8	16.5	17.0	16.8	17.6	17.3	18.1	18.5
	6H	15.3	15.9	15.8	16.3	16.9	16.9	17.5	17.4	18.0	18.5
	8H	15.2	15.8	15.8	16.3	16.8	16.9	17.4	17.4	17.9	18.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0