

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01614_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	2982
Efficacy	107.25 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.34
Two luminaires, plane 90°	1.31
Four luminaires	1.46

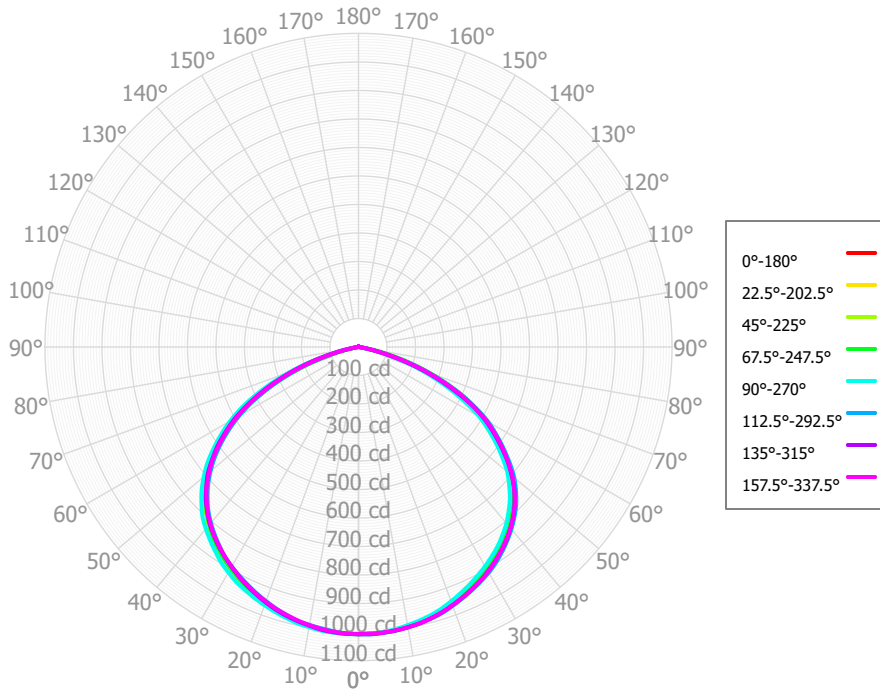
Full Beam Angle

0° - 180°	120°
90° - 270°	120°

IES File Header Contents

Keyword	Value
TEST	SP-01614_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/8/2023
ISSUEDATE	11/09/2023
LUMCAT	SN32 30L 30HK xx xx xx MWI
LUMINAIRE	32" x 11" Spin Pendant 30L 30HK MWI
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°	97.01	3.25%	90.00° - 100.00°	1.59	0.05%
10.00° - 20.00°	276.51	9.27%	100.00° - 110.00°	1.57	0.05%
20.00° - 30.00°	429.27	14.40%	100.00° - 120.00°	3.00	0.10%
30.00° - 40.00°	540.13	18.11%	120.00° - 130.00°	1.35	0.05%
40.00° - 50.00°	588.14	19.72%	130.00° - 140.00°	1.21	0.04%
50.00° - 60.00°	539.21	18.08%	140.00° - 150.00°	0.97	0.03%
60.00° - 70.00°	373.05	12.51%	150.00° - 160.00°	0.72	0.02%
70.00° - 80.00°	122.56	4.11%	160.00° - 170.00°	0.44	0.01%
80.00° - 90.00°	6.37	0.21%	170.00° - 180.00°	0.15	0.01%
0.00° - 90.00°	2972.24	99.68%	0.00° - 180.00°	2981.68	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°	1007.50	1007.50	1007.50	1007.50	1007.50	1007.50	1007.50	1007.50	1007.50	1007.50	1007.50	1007.50	1007.50	1007.50	1007.50	1007.50	1007.50
2.50°	1005.79	1007.00	1007.11	1007.25	1007.29	1006.80	1007.01	1005.92	1005.91	1005.95	1007.06	1005.23	1008.26	1009.13	1008.41	1006.98	1005.79
5.00°	1004.13	1004.49	1004.72	1004.85	1003.40	1001.44	1004.74	1002.55	1003.26	1003.17	1003.88	1001.93	1006.34	1006.80	1006.30	1005.27	1004.13
7.50°	1001.95	1001.41	1001.69	1000.91	998.21	995.72	1000.29	997.63	999.01	1000.20	999.52	997.87	1003.70	1003.93	1003.05	1002.43	1001.95
10.00°	995.97	996.04	995.20	995.09	991.11	990.27	992.96	990.81	993.12	993.02	993.18	992.42	998.54	998.82	998.47	998.61	995.97
12.50°	988.14	990.12	987.80	987.81	983.27	984.66	985.13	982.88	985.31	985.67	986.19	986.42	992.59	993.31	993.41	992.61	988.14
15.00°	979.50	982.58	978.90	979.10	974.59	973.41	976.78	973.24	975.95	975.93	978.32	977.00	983.87	986.58	985.03	985.07	979.50
17.50°	970.54	973.64	969.73	968.98	963.31	961.98	966.05	962.83	965.14	965.92	968.20	966.59	974.52	978.29	975.76	975.30	970.54
20.00°	958.67	961.67	957.21	957.75	949.61	948.60	953.34	950.21	953.39	952.85	955.71	954.95	964.04	966.50	964.03	964.32	958.67
22.50°	945.99	948.80	944.33	945.30	935.19	934.99	939.32	936.83	939.54	939.68	942.65	943.06	953.41	954.38	951.86	951.81	945.99
25.00°	932.78	934.39	930.10	932.11	920.25	920.00	924.42	921.95	924.62	925.88	929.10	928.34	941.40	941.67	938.51	938.65	932.78
27.50°	919.48	919.52	915.78	917.32	904.40	904.91	907.96	906.69	909.86	911.33	914.27	913.27	929.29	928.34	925.03	924.49	919.48
30.00°	902.67	904.05	899.73	901.74	888.02	889.36	890.69	889.72	895.16	893.54	898.58	896.60	913.11	914.15	908.39	910.01	902.67
32.50°	885.46	887.12	883.41	884.38	870.27	872.35	872.61	872.47	876.97	875.62	880.56	879.83	896.68	897.44	891.59	891.52	885.46
35.00°	867.62	868.62	863.45	866.36	851.88	850.99	854.19	852.57	857.75	857.34	861.33	859.68	875.99	877.86	872.69	872.11	867.62
37.50°	849.66	847.43	843.01	845.03	830.14	829.02	833.23	832.40	836.76	836.95	840.11	839.23	855.17	856.88	853.43	851.00	849.66
40.00°	824.70	823.92	819.33	822.82	807.26	805.67	811.50	808.28	815.41	811.67	818.06	814.09	833.18	834.63	829.32	829.63	824.70
42.50°	799.40	798.38	794.74	796.95	779.80	779.70	785.19	783.92	787.84	784.70	791.43	788.23	809.86	809.52	804.39	803.22	799.40
45.00°	769.30	771.46	766.17	770.38	751.19	749.23	757.90	753.48	759.44	754.77	763.40	756.32	779.09	782.41	773.91	776.41	769.30
47.50°	737.81	737.43	735.29	738.76	716.80	715.65	724.35	722.39	725.86	721.46	727.50	722.86	746.79	749.46	741.66	740.84	737.81
50.00°	696.37	699.50	697.01	706.58	681.43	677.76	689.93	683.76	691.96	683.33	689.95	681.54	708.74	713.20	701.37	704.84	696.37
52.50°	654.08	657.57	656.63	663.75	635.95	635.70	646.62	643.83	647.63	640.93	644.67	638.61	668.19	668.83	659.32	660.90	654.08
55.00°	607.77	613.96	611.28	620.31	589.51	589.08	602.70	595.83	602.96	593.72	598.31	589.90	620.55	620.92	611.70	616.54	607.77
57.50°	560.20	567.40	564.22	571.89	539.81	538.76	551.74	546.70	553.67	544.50	549.79	539.30	571.70	573.34	563.38	568.22	560.20
60.00°	508.44	519.88	513.94	522.71	489.64	485.25	500.18	492.74	503.14	493.48	501.12	483.73	520.25	525.85	513.39	518.08	508.44
62.50°	452.17	458.99	457.10	462.83	425.01	424.83	437.94	435.59	442.60	433.06	436.17	424.03	463.26	464.89	456.19	457.35	452.17
65.00°	384.93	395.07	390.72	401.94	360.19	359.56	375.19	368.77	380.61	365.82	370.77	356.13	396.84	400.71	385.59	394.59	384.93
67.50°	315.99	327.35	322.57	333.56	293.19	292.13	308.00	301.47	311.14	298.03	300.41	286.45	327.87	330.23	314.74	323.96	315.99
70.00°	243.82	259.09	252.39	265.41	226.12	223.51	240.95	233.08	242.11	229.93	230.20	213.97	255.50	258.76	243.53	252.87	243.82
72.50°	173.49	188.44	183.71	198.37	158.62	157.99	174.60	166.29	174.59	162.19	161.22	145.73	184.77	186.07	173.65	180.51	173.49
75.00°	105.90	117.60	116.43	133.22	95.18	93.80	111.40	102.38	111.19	94.60	95.77	82.79	115.75	113.27	105.33	113.78	105.90
77.50°	54.55	66.08	65.18	74.44	48.70	50.98	59.74	52.72	58.42	51.15	49.28	39.59	63.22	63.50	54.83	59.30	54.55
80.00°	22.81	16.42	25.73	28.32	12.22	15.05	19.39	22.97	19.73	15.77	11.76	15.84	24.72	15.79	20.89	21.10	22.81
82.50°	5.91	9.42	8.15	13.58	6.72	5.96	10.28	5.96	9.58	6.29	6.90	4.22	7.23	9.25	5.29	10.16	5.91
85.00°	3.16	3.02	3.55	3.55	2.66	2.97	3.65	3.41	3.03	2.97	3.07	2.31	3.84	3.22	3.14	3.32	3.16
87.50°	1.78	2.41	1.76	2.40	1.94	2.02	2.20	2.00	2.12	2.06	2.07	1.43	2.25	2.43	2.15	2.03	1.78
90.00°	1.44	1.86	1.25	1.65	1.47	1.38	1.33	1.60	1.59	1.53	1.38	1.21	1.59	1.76	1.85	1.44	1.44
92.50°	1.39	1.68	1.11	1.51	1.45	1.19	1.41	1.44	1.56	1.42	1.35	1.17	1.34	1.74	1.58	1.57	1.39
95.00°	1.50	1.53	1.11	1.53	1.48	1.02	1.46	1.45	1.46	1.36	1.38	1.22	1.26	1.70	1.31	1.61	1.50
97.50°	1.70	1.49	1.37	1.74	1.57	1.27	1.49	1.36	1.30	1.46	1.53	1.20	1.51	1.57	1.42	1.56	1.70
100.00°	1.94	1.48	1.71	1.92	1.43	1.52	1.52	1.23	1.23	1.57	1.49	1.14	1.87	1.47	1.67	1.47	1.94
102.50°	1.98	1.55	1.75	2.08	1.02	1.53	1.56	1.34	1.23	1.39	1.22	1.49	1.62	1.47	1.49	1.36	1.98
105.00°	1.96	1.55	1.75	2.03	0.82	1.53	1.57	1.55	1.27	1.24	1.16	1.95	1.25	1.52	1.19	1.56	1.96

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	3547	3547	3547	3547	3464	3464	3464	3464	3308	3308	3308	3165	3165	3165	3034	3034	2972
	1	3270	3139	3022	2917	3189	3071	2965	2869	2944	2857	2777	2827	2756	2691	2719	2662	2606
	2	2980	2747	2554	2392	2902	2690	2513	2363	2584	2435	2307	2486	2362	2253	2395	2293	2242
	3	2718	2413	2178	1990	2644	2366	2148	1972	2276	2090	1936	2193	2035	1901	2117	1982	1938
	4	2485	2135	1878	1682	2417	2095	1855	1670	2019	1811	1646	1949	1769	1623	1884	1728	1690
	5	2282	1903	1638	1443	2219	1869	1621	1435	1805	1586	1418	1745	1553	1402	1689	1521	1488
	6	2103	1709	1444	1254	2046	1680	1430	1248	1625	1402	1236	1574	1376	1224	1527	1351	1322
	7	1947	1546	1285	1103	1895	1521	1274	1098	1474	1252	1089	1430	1230	1081	1389	1209	1185
	8	1810	1407	1153	979	1762	1386	1144	976	1346	1126	969	1308	1108	963	1272	1091	1070
	9	1688	1288	1043	878	1646	1270	1036	875	1235	1021	870	1203	1006	865	1172	992	973
	10	1581	1186	950	793	1542	1171	944	791	1140	931	787	1112	919	783	1085	907	891

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	33.3 fc	19.1 ft
6.5 ft	23.8 fc	22.6 ft
7.5 ft	17.9 fc	26.0 ft
8.0 ft	15.7 fc	27.8 ft
10.0 ft	10.1 fc	34.7 ft
12.0 ft	7.0 fc	41.7 ft
14.0 ft	5.1 fc	48.6 ft
16.0 ft	3.9 fc	55.5 ft
20.0 ft	2.5 fc	69.4 ft
24.0 ft	1.7 fc	83.3 ft
28.0 ft	1.3 fc	97.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1937	1937	1937
45.00°	2092	2083	2042
55.00°	2037	2049	1976
65.00°	1751	1777	1638
75.00°	787	865	707
85.00°	70	78	59

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	14.3	15.9	14.6	16.2	16.5	14.0	15.6	14.3	15.9	16.2
	3H	15.6	17.0	16.0	17.4	17.7	15.2	16.7	15.6	17.0	17.4
	4H	15.8	17.2	16.2	17.5	17.9	15.4	16.8	15.8	17.1	17.5
	6H	15.8	17.1	16.2	17.4	17.8	15.4	16.7	15.8	17.0	17.4
	8H	15.8	17.0	16.2	17.4	17.8	15.4	16.6	15.8	17.0	17.4
	12H	15.7	16.9	16.2	17.3	17.7	15.4	16.5	15.8	16.9	17.3
4H	2H	14.8	16.2	15.2	16.5	16.9	14.5	15.9	14.9	16.2	16.6
	3H	16.3	17.4	16.7	17.8	18.2	15.9	17.0	16.3	17.4	17.8
	4H	16.5	17.5	17.0	18.0	18.4	16.1	17.1	16.5	17.5	17.9
	6H	16.6	17.4	17.0	17.9	18.3	16.1	17.0	16.5	17.4	17.9
	8H	16.5	17.3	17.0	17.8	18.3	16.1	16.9	16.5	17.3	17.8
	12H	16.5	17.2	17.0	17.7	18.2	16.0	16.8	16.5	17.2	17.7
8H	4H	16.6	17.4	17.1	17.9	18.3	16.1	16.9	16.6	17.4	17.9
	6H	16.6	17.3	17.1	17.8	18.3	16.1	16.8	16.6	17.3	17.8
	8H	16.6	17.2	17.1	17.7	18.2	16.1	16.7	16.6	17.2	17.7
	12H	16.6	17.1	17.1	17.6	18.1	16.1	16.6	16.6	17.1	17.7
12H	4H	16.6	17.3	17.1	17.8	18.3	16.1	16.8	16.6	17.3	17.8
	6H	16.6	17.2	17.1	17.7	18.2	16.1	16.7	16.6	17.2	17.7
	8H	16.6	17.1	17.1	17.6	18.1	16.1	16.6	16.6	17.1	17.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0