

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SR3Mx 25L 35HK WD xx xx RH3F 25L 35HK WD MW GL
Nom. 3" Round Pinhole A-Spec, Wide Beam

Test Number

SP-01403_1

Test Date

9/14/2022

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

Summary of Results

Power

Input Watts	26.3 W
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Lumen Output

Output Lumens	1391
Efficacy	52.9 lm/W

Luminous Dimensions

0° - 180° Size	-0.15
90° - 270° Size	-0.15
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.67
Two luminaires, plane 90°	0.68
Four luminaires	0.66

Full Beam Angle

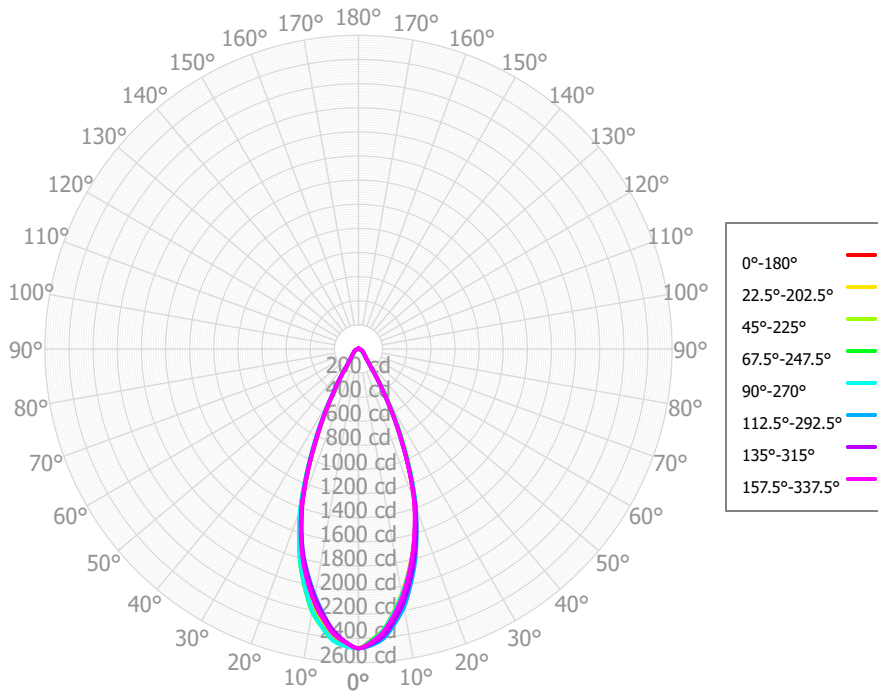
0° - 180°	42°
90° - 270°	43°

IES File Header Contents

Keyword	Value
TEST	SP-01403_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/14/2022
ISSUDATE	10/25/2022
LUMCAT	SR3Mx 25L 35HK WD xx xx RH3F 25L 35HK WD MW GL
LUMINAIRE	Nom. 3" Round Pinhole A-Spec, Wide Beam
OTHER	Matte White Trim, Clear glass lens
OTHER	42 Degree Beam Angle
LAMP	N/A, 19mm LES
LAMPCAT	N/A, Min. 90 CRI
OTHER	Reference project SL167
OTHER	minus 2W, no thermal protection required for 7L, 10L, and 15L (non-IC)
OTHER	minus 2W, no thermal protection required for all (including 20L and 25L) IC luminaires
OTHER	Total Luminaire Watts is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	90

SR3Mx 25L 35HK WD xx xx RH3F 25L 35HK
 WD MW GL

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	221.00	15.88%	90.00° - 100.00°	2.06	0.15%
10.00° - 20.00°	489.38	35.17%	100.00° - 110.00°	1.92	0.14%
20.00° - 30.00°	389.35	27.98%	100.00° - 120.00°	3.81	0.27%
30.00° - 40.00°	124.85	8.97%	120.00° - 130.00°	1.68	0.12%
40.00° - 50.00°	56.81	4.08%	130.00° - 140.00°	1.55	0.11%
50.00° - 60.00°	40.49	2.91%	140.00° - 150.00°	1.42	0.10%
60.00° - 70.00°	33.02	2.37%	150.00° - 160.00°	1.07	0.08%
70.00° - 80.00°	17.98	1.29%	160.00° - 170.00°	0.64	0.05%
80.00° - 90.00°	5.98	0.43%	170.00° - 180.00°	0.21	0.01%
0.00° - 90.00°	1378.85	99.11%	0.00° - 180.00°	1391.30	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°	2481.80	2481.80	2481.80	2481.80	2481.80	2481.80	2481.80	2481.80	2481.80	2481.80	2481.80	2481.80	2481.80	2481.80	2481.80	2481.80	2481.80
2.50°	2421.06	2419.96	2427.62	2420.41	2430.19	2433.34	2431.96	2437.80	2442.62	2453.44	2458.17	2460.14	2467.04	2459.69	2447.49	2434.56	2421.06
5.00°	2348.29	2342.56	2344.62	2342.37	2346.69	2360.06	2348.43	2374.45	2385.01	2412.63	2409.76	2424.88	2426.54	2408.82	2389.54	2356.31	2348.29
7.50°	2212.77	2204.87	2210.92	2212.77	2215.26	2219.39	2226.64	2257.22	2274.20	2305.02	2318.46	2324.64	2325.26	2297.89	2273.69	2231.65	2212.77
10.00°	2071.53	2061.74	2069.73	2074.77	2069.97	2076.54	2088.72	2127.19	2150.38	2190.20	2191.04	2213.22	2206.87	2174.05	2140.98	2088.94	2071.53
12.50°	1907.97	1905.31	1919.89	1916.80	1912.50	1924.55	1933.32	1966.61	1976.57	2008.80	2029.56	2040.94	2034.09	2000.70	1971.03	1920.18	1907.97
15.00°	1739.70	1747.68	1757.46	1755.77	1751.50	1766.43	1770.81	1794.09	1791.11	1824.18	1840.24	1861.10	1852.10	1816.71	1791.61	1741.30	1739.70
17.50°	1553.84	1562.76	1580.94	1571.98	1571.10	1583.76	1573.27	1594.08	1577.42	1612.12	1622.77	1640.05	1641.98	1603.57	1591.28	1548.47	1553.84
20.00°	1354.77	1375.63	1375.91	1384.71	1385.33	1385.64	1361.49	1372.26	1357.47	1392.92	1382.98	1408.95	1413.92	1384.49	1372.15	1350.43	1354.77
22.50°	1108.52	1124.38	1139.96	1137.25	1140.08	1125.59	1106.24	1100.16	1093.06	1113.09	1121.24	1126.13	1131.15	1118.21	1112.87	1105.97	1108.52
25.00°	867.32	868.46	902.51	881.17	879.07	872.26	833.96	841.00	818.79	838.83	842.10	850.95	859.38	842.80	862.53	844.76	867.32
27.50°	644.20	649.48	663.43	660.41	654.42	644.72	611.32	610.60	595.73	608.44	602.29	613.02	619.91	616.41	630.63	623.39	644.20
30.00°	438.07	433.19	460.07	444.37	439.40	434.66	407.44	408.61	383.45	390.86	392.72	393.60	406.92	399.48	425.83	416.39	438.07
32.50°	290.03	294.51	294.32	304.15	297.17	288.68	272.64	267.70	263.03	266.99	253.53	264.43	268.59	271.40	276.92	278.26	290.03
35.00°	167.59	160.81	185.04	174.05	173.37	165.66	163.93	161.05	160.96	154.55	166.87	152.85	157.95	159.55	164.78	164.04	167.59
37.50°	129.06	125.72	133.49	129.96	125.72	126.78	118.45	128.05	123.21	125.68	118.94	122.74	125.35	121.20	125.98	117.93	129.06
40.00°	96.56	96.14	98.87	96.53	96.47	93.95	95.96	101.25	98.29	98.97	99.92	96.06	97.84	95.52	96.08	94.55	96.56
42.50°	83.84	83.57	81.55	82.20	80.85	82.35	82.74	87.33	85.48	86.90	85.75	84.51	84.17	82.73	83.34	81.49	83.84
45.00°	72.13	71.95	68.75	70.06	68.52	71.30	72.89	74.60	74.95	75.25	75.10	73.68	72.15	72.15	72.31	71.86	72.13
47.50°	63.61	63.30	60.45	60.97	59.65	62.10	63.52	64.29	66.35	66.25	65.96	66.06	64.62	64.58	64.57	63.90	63.61
50.00°	55.73	54.78	52.94	52.23	51.58	53.56	54.30	55.53	58.12	57.72	57.91	58.59	57.64	57.51	57.13	56.47	55.73
52.50°	49.91	48.30	46.21	45.74	44.63	47.20	49.09	49.88	51.85	52.27	51.42	51.80	52.09	51.61	50.22	50.57	49.91
55.00°	44.67	41.91	41.25	39.48	37.94	41.50	45.23	45.17	45.93	47.00	46.03	45.50	46.96	45.90	45.15	45.16	44.67
57.50°	41.22	38.38	37.98	36.63	35.93	37.91	41.74	42.28	43.16	42.73	42.29	41.28	42.86	43.44	43.49	41.95	41.22
60.00°	38.16	34.96	35.28	34.14	34.95	35.24	38.38	39.96	40.93	38.93	39.66	37.77	39.39	41.48	41.58	39.42	38.16
62.50°	36.22	33.54	33.10	33.44	33.65	35.54	35.91	38.76	39.57	37.94	37.73	37.09	37.46	39.04	39.23	36.77	36.22
65.00°	33.55	32.18	30.51	32.91	32.28	34.57	33.72	36.39	38.34	36.37	36.28	35.73	35.18	36.52	35.77	34.09	33.55
67.50°	28.76	27.42	27.53	28.80	28.27	29.68	30.07	31.85	33.36	31.46	32.65	31.77	32.03	31.62	30.36	29.91	28.76
70.00°	24.24	22.56	24.05	24.37	23.70	25.01	25.97	27.20	27.79	26.65	27.60	27.53	27.80	26.38	25.30	25.29	24.24
72.50°	20.50	18.72	20.11	20.15	19.01	21.04	21.47	22.35	23.08	22.30	22.36	22.25	21.02	20.93	20.87	20.55	20.50
75.00°	16.73	14.91	16.05	15.95	14.30	17.20	16.86	17.87	18.51	17.95	16.99	17.41	15.39	15.44	16.54	15.78	16.73
77.50°	12.88	11.62	11.91	12.55	11.42	13.77	13.69	14.07	14.58	13.57	13.21	14.14	12.42	12.37	12.38	12.82	12.88
80.00°	9.40	8.34	8.96	9.21	8.88	10.69	10.96	10.54	10.75	9.59	10.44	10.99	9.67	9.59	9.17	10.35	9.40
82.50°	6.90	6.38	7.09	6.65	7.19	8.63	8.24	7.45	7.99	7.64	7.66	8.23	7.42	7.05	7.51	7.62	6.90
85.00°	4.63	4.43	5.31	4.15	5.65	6.42	5.53	4.84	5.38	5.68	4.87	5.60	5.24	4.53	5.67	4.82	4.63
87.50°	2.94	3.20	3.61	2.99	3.88	3.80	3.78	3.05	3.54	3.65	3.23	3.42	3.21	3.19	3.52	3.24	2.94
90.00°	1.69	1.97	2.49	1.93	2.07	1.87	2.29	1.98	1.81	1.97	2.29	1.74	1.82	1.98	2.21	1.98	1.69
92.50°	1.54	1.85	1.86	1.80	1.97	1.89	1.94	2.13	1.72	1.93	1.82	1.73	1.84	2.11	2.25	1.71	1.54
95.00°	1.46	1.74	1.70	1.73	2.17	1.90	1.90	2.20	1.84	1.95	1.63	1.71	1.83	2.38	2.14	1.69	1.46
97.50°	1.56	1.99	1.93	1.79	1.99	1.94	1.86	2.11	1.79	2.21	1.66	1.67	1.77	2.37	1.78	1.64	1.56
100.00°	1.66	2.23	1.94	1.85	1.76	1.88	1.84	1.96	1.71	2.36	1.81	1.63	1.76	2.34	1.58	1.57	1.66

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	pfc	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	1653	1653	1653	1653	1613	1613	1613	1613	1539	1539	1539	1471	1471	1471	1408	1408	1379
	1	1573	1534	1498	1466	1538	1502	1470	1442	1444	1418	1395	1390	1370	1351	1340	1324	1297
	2	1496	1428	1372	1324	1464	1403	1352	1308	1356	1314	1278	1313	1279	1249	1273	1245	1220
	3	1425	1336	1268	1214	1396	1316	1253	1203	1278	1225	1182	1243	1199	1162	1210	1174	1150
	4	1358	1256	1181	1124	1333	1240	1170	1117	1208	1149	1102	1179	1129	1088	1152	1110	1088
	5	1297	1185	1107	1049	1274	1171	1099	1044	1145	1082	1034	1121	1067	1024	1099	1052	1032
	6	1240	1122	1043	986	1219	1110	1036	982	1089	1023	974	1068	1011	967	1049	999	981
	7	1187	1065	986	930	1168	1055	980	927	1037	970	922	1020	960	916	1003	951	935
	8	1138	1013	935	881	1121	1005	931	879	989	923	875	975	914	871	961	907	892
	9	1092	966	890	838	1076	959	886	836	946	879	833	933	873	829	921	866	853
	10	1049	923	848	798	1035	917	845	797	906	840	794	894	834	792	884	829	817

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	82.0 fc	4.3 ft
6.5 ft	58.7 fc	5.0 ft
7.5 ft	44.1 fc	5.8 ft
8.0 ft	38.8 fc	6.2 ft
10.0 ft	24.8 fc	7.7 ft
12.0 ft	17.2 fc	9.3 ft
14.0 ft	12.7 fc	10.8 ft
16.0 ft	9.7 fc	12.4 ft
20.0 ft	6.2 fc	15.5 ft
24.0 ft	4.3 fc	18.5 ft
28.0 ft	3.2 fc	21.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1511695	1511695	1511695
45.00°	62137	59224	59027
55.00°	47436	43807	40295
65.00°	48356	43971	46527
75.00°	39370	37784	33651
85.00°	32366	37081	39491

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	19.3	20.3	19.7	20.6	21.0	19.1	20.2	19.5	20.5	20.9
	3H	21.2	22.1	21.6	22.5	22.9	21.4	22.3	21.8	22.6	23.0
	4H	21.8	22.7	22.3	23.1	23.5	22.0	22.8	22.4	23.2	23.6
	6H	22.2	23.0	22.7	23.4	23.8	22.3	23.1	22.8	23.5	23.9
	8H	22.4	23.1	22.8	23.5	24.0	22.5	23.2	22.9	23.6	24.1
	12H	22.5	23.2	22.9	23.6	24.0	22.6	23.3	23.1	23.7	24.2
4H	2H	20.0	20.8	20.4	21.2	21.6	20.0	20.8	20.4	21.2	21.6
	3H	22.0	22.7	22.5	23.2	23.6	22.3	23.0	22.7	23.4	23.8
	4H	22.7	23.3	23.2	23.8	24.2	23.0	23.6	23.4	24.0	24.5
	6H	23.2	23.8	23.7	24.2	24.7	23.5	24.0	24.0	24.5	25.0
	8H	23.4	23.9	23.9	24.3	24.8	23.7	24.2	24.2	24.6	25.1
	12H	23.5	23.9	24.0	24.5	25.0	23.8	24.3	24.3	24.8	25.3
8H	4H	22.9	23.4	23.4	23.9	24.4	23.2	23.7	23.7	24.2	24.7
	6H	23.5	23.9	24.1	24.5	25.0	23.9	24.3	24.4	24.8	25.3
	8H	23.8	24.1	24.3	24.7	25.2	24.2	24.5	24.7	25.1	25.6
	12H	24.0	24.3	24.5	24.8	25.4	24.5	24.8	25.0	25.3	25.9
12H	4H	22.9	23.3	23.4	23.8	24.3	23.2	23.6	23.7	24.1	24.6
	6H	23.6	23.9	24.1	24.4	25.0	23.9	24.3	24.5	24.8	25.3
	8H	23.9	24.2	24.4	24.7	25.3	24.3	24.6	24.8	25.1	25.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0