

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SR3Mx 25L 35K MD xx xx RA3F 25L 35K MD MW SO (nadir)
Nom. 3" Round Downlight, Medium Beam

Test Number

SP-01393_4

Test Date

9/7/2022

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	1917
Efficacy	72.89 lm/W

Luminous Dimensions

0° - 180° Size	-0.25
90° - 270° Size	-0.25
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.71
Two luminaires, plane 90°	0.72
Four luminaires	0.69

Full Beam Angle

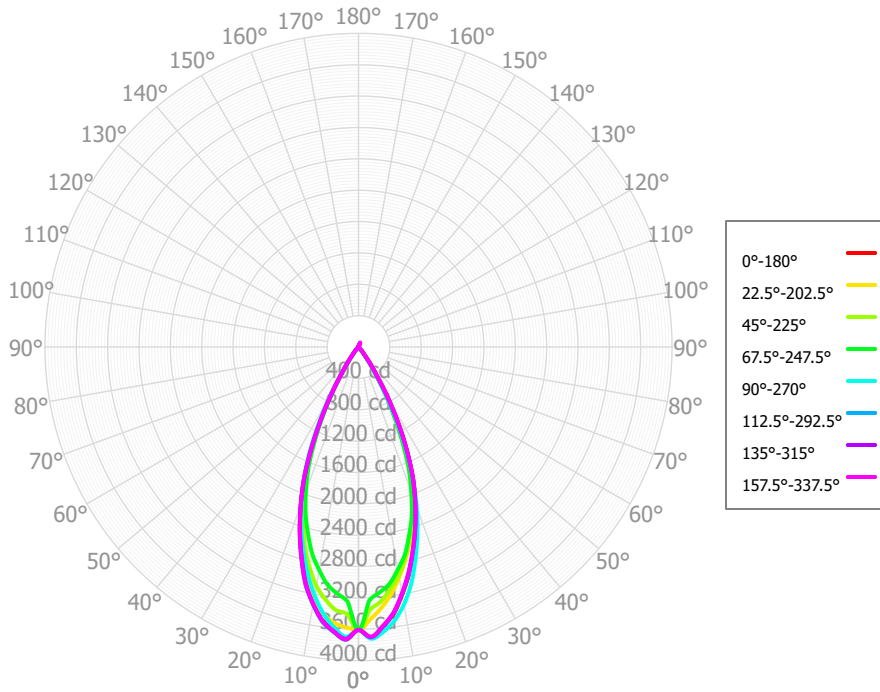
0° - 180°	44°
90° - 270°	44°

IES File Header Contents

Keyword	Value
TEST	SP-01393_4
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/7/2022
ISSUDATE	12/16/2022
LUMCAT	SR3Mx 25L 35K MD xx xx RA3F 25L 35K MD MW SO (nadir)
LUMINAIRE	Nom. 3" Round Downlight, Medium Beam
OTHER	Matte White Trim, Solite Lens
OTHER	44 Degree Beam Angle
LAMP	N/A, 19mm LES
LAMPCAT	N/A, Min. 80 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	80

SR3Mx 25L 35K MD xx xx RA3F 25L 35K MD
 MW SO (nadir)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	327.73	17.10%	90.00° - 100.00°	1.38	0.07%
10.00° - 20.00°	737.14	38.45%	100.00° - 110.00°	1.32	0.07%
20.00° - 30.00°	628.82	32.80%	100.00° - 120.00°	2.67	0.14%
30.00° - 40.00°	169.76	8.86%	120.00° - 130.00°	1.59	0.08%
40.00° - 50.00°	20.56	1.07%	130.00° - 140.00°	1.77	0.09%
50.00° - 60.00°	5.47	0.29%	140.00° - 150.00°	2.17	0.11%
60.00° - 70.00°	4.27	0.22%	150.00° - 160.00°	4.26	0.22%
70.00° - 80.00°	4.35	0.23%	160.00° - 170.00°	2.72	0.14%
80.00° - 90.00°	2.06	0.11%	170.00° - 180.00°	0.19	0.01%
0.00° - 90.00°	1900.18	99.13%	0.00° - 180.00°	1916.92	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°	3610.72	3610.72	3610.72	3610.72	3610.72	3610.72	3610.72	3610.72	3610.72	3610.72	3610.72	3610.72	3610.72	3610.72	3610.72	3610.72	3610.72
2.50°	3706.98	3477.29	3355.71	3232.56	3725.83	3736.51	3727.36	3731.85	3736.69	3581.94	3410.30	3248.26	3699.97	3707.97	3700.55	3702.48	3706.98
5.00°	3575.87	3342.83	3259.99	3140.46	3647.29	3649.42	3644.00	3639.54	3632.13	3534.21	3366.19	3155.80	3589.55	3582.85	3581.86	3574.00	3575.87
7.50°	3437.32	3180.30	3113.26	3045.06	3521.05	3536.08	3519.38	3528.19	3524.04	3435.08	3246.54	3055.86	3431.67	3427.78	3421.37	3422.03	3437.32
10.00°	3207.59	2984.61	2951.29	2884.23	3338.45	3336.31	3331.93	3325.26	3310.61	3254.48	3096.03	2888.57	3220.61	3202.15	3199.61	3192.02	3207.59
12.50°	2972.99	2775.44	2750.71	2721.26	3100.86	3114.14	3095.15	3107.56	3092.72	3026.81	2881.43	2712.80	2978.85	2962.50	2951.43	2950.92	2972.99
15.00°	2697.83	2552.24	2540.58	2491.56	2806.03	2810.99	2792.46	2803.52	2792.32	2747.39	2640.11	2481.13	2708.41	2694.36	2682.93	2678.75	2697.83
17.50°	2419.92	2314.52	2291.88	2258.64	2495.95	2490.76	2480.35	2489.12	2489.20	2441.96	2350.65	2241.82	2423.56	2417.63	2406.94	2402.78	2419.92
20.00°	2125.02	2063.52	2035.47	1968.11	2171.90	2153.32	2157.16	2152.28	2156.01	2111.48	2045.93	1963.28	2127.39	2125.73	2115.51	2117.67	2125.02
22.50°	1819.02	1771.36	1717.19	1671.17	1810.18	1813.03	1799.75	1813.60	1816.08	1770.13	1717.20	1669.84	1826.32	1811.57	1819.19	1812.11	1819.02
25.00°	1457.99	1445.63	1389.25	1305.06	1418.07	1412.73	1406.92	1419.90	1424.00	1391.94	1367.32	1314.86	1471.24	1462.67	1466.61	1463.81	1457.99
27.50°	1099.50	1101.59	1032.38	945.13	1036.48	1004.95	1029.20	1023.67	1040.23	1000.04	988.25	966.54	1096.09	1108.63	1099.15	1112.56	1099.50
30.00°	751.26	744.43	672.08	632.18	662.36	677.89	665.24	701.09	704.92	679.77	656.75	640.98	758.04	747.55	767.06	755.95	751.26
32.50°	442.07	470.84	429.19	345.41	403.49	357.76	403.49	383.01	401.57	382.05	383.60	359.78	431.82	455.93	442.58	460.24	442.07
35.00°	262.78	249.72	195.74	209.19	216.24	225.88	223.73	245.83	248.53	230.69	199.59	205.97	249.80	247.89	265.98	261.03	262.78
37.50°	118.41	131.03	120.69	91.58	116.94	103.36	120.40	113.72	118.60	117.72	111.85	86.82	106.18	114.67	114.60	123.36	118.41
40.00°	71.99	68.49	52.70	58.85	65.32	68.24	71.55	75.53	77.19	71.47	57.99	52.55	57.69	60.75	66.49	71.16	71.99
42.50°	35.84	38.12	36.58	30.88	38.17	34.88	41.93	39.37	42.37	39.50	36.36	26.48	29.88	29.45	32.02	36.36	35.84
45.00°	24.64	23.05	21.19	20.67	22.54	24.55	24.33	25.72	28.59	25.51	22.13	17.69	19.45	19.27	21.50	22.83	24.64
47.50°	15.59	14.98	14.46	12.07	14.17	14.54	14.61	13.22	17.26	14.56	14.08	10.86	12.03	12.47	13.21	13.92	15.59
50.00°	11.03	9.78	8.01	8.47	8.79	10.83	9.18	9.52	12.52	10.44	9.24	7.64	9.13	8.44	9.61	10.00	11.03
52.50°	7.65	7.11	6.85	5.74	6.63	7.32	6.91	6.20	8.67	7.18	6.79	5.39	6.82	6.32	6.27	7.60	7.65
55.00°	6.43	5.32	5.68	5.33	5.59	6.11	6.13	5.10	6.88	5.90	5.37	4.70	6.17	5.56	5.94	6.63	6.43
57.50°	5.48	4.52	4.37	4.81	4.47	4.95	5.41	4.26	5.56	4.79	4.62	4.29	5.68	5.06	5.68	5.77	5.48
60.00°	4.99	4.01	3.30	4.06	3.33	4.24	4.71	4.67	5.18	5.03	4.14	4.26	4.60	4.72	5.17	5.00	4.99
62.50°	4.56	3.71	4.06	3.48	3.38	3.63	4.54	4.88	4.95	5.35	3.82	4.17	3.49	4.50	4.68	4.58	4.56
65.00°	4.22	3.46	4.61	3.23	3.73	3.62	4.55	4.40	5.00	5.15	4.14	4.00	4.05	4.33	4.88	4.41	4.22
67.50°	4.51	3.78	3.86	3.30	3.64	3.64	4.32	4.12	4.94	4.94	4.79	4.08	4.65	4.79	5.04	4.49	4.51
70.00°	5.54	4.21	3.31	3.91	3.46	3.79	4.01	4.54	4.74	4.82	4.44	4.42	4.98	5.54	4.64	4.74	5.54
72.50°	5.73	4.76	3.72	4.24	3.58	3.88	3.85	4.69	4.75	4.65	3.65	4.39	5.29	5.48	4.33	5.27	5.73
75.00°	5.00	5.33	4.01	4.16	3.75	3.72	3.72	4.14	5.05	3.10	2.99	3.98	4.86	5.10	4.79	5.97	5.00
77.50°	4.21	5.29	3.82	3.73	3.19	3.29	3.06	3.47	4.62	1.65	2.37	3.34	4.37	4.69	5.05	5.43	4.21
80.00°	3.36	5.19	3.57	2.87	2.54	1.99	2.29	2.52	3.33	1.48	1.79	2.50	3.18	4.28	4.05	4.29	3.36
82.50°	2.60	4.03	3.16	2.15	1.87	1.08	1.69	1.78	2.27	1.33	1.23	1.91	2.08	3.17	3.07	3.15	2.60
85.00°	1.92	2.79	2.65	1.58	1.20	1.22	1.12	1.47	1.47	1.41	1.14	1.53	1.75	1.85	2.19	2.00	1.92
87.50°	1.51	2.11	1.88	1.30	1.20	1.27	1.29	1.31	1.04	1.49	1.17	1.27	1.45	1.38	1.47	1.46	1.51
90.00°	1.29	1.45	1.36	1.31	1.23	1.10	1.54	1.42	0.97	1.58	1.12	1.11	1.40	1.12	1.35	1.14	1.29
92.50°	1.22	1.31	1.42	1.26	1.16	1.03	1.63	1.49	1.01	1.64	1.05	1.15	1.34	1.03	1.25	1.10	1.22
95.00°	1.25	1.18	1.46	1.17	1.09	1.17	1.71	1.52	1.15	1.55	1.10	1.31	1.28	0.97	1.24	1.14	1.25
97.50°	1.25	1.14	1.49	1.16	1.27	1.26	1.35	1.47	1.18	1.47	1.18	1.34	1.24	1.14	1.23	1.22	1.25
100.00°	1.24	1.09	1.42	1.24	1.44	1.30	0.98	1.31	1.14	1.43	1.16	1.30	1.33	1.34	1.23	1.31	1.24

SR3Mx 25L 35K MD xx xx RA3F 25L 35K MD
 MW SO (nadir)

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	2278	2278	2278	2278	2223	2223	2223	2223	2121	2121	2121	2027	2027	2027	1941	1941	1900
	1	2184	2137	2094	2055	2136	2094	2056	2021	2014	1984	1956	1940	1917	1895	1872	1855	1816
	2	2094	2011	1943	1886	2051	1977	1916	1864	1914	1864	1821	1855	1815	1780	1801	1769	1734
	3	2007	1900	1817	1751	1969	1873	1797	1736	1821	1758	1706	1774	1722	1678	1730	1687	1654
	4	1925	1800	1708	1638	1891	1777	1693	1628	1736	1664	1607	1697	1636	1587	1661	1610	1580
	5	1846	1709	1613	1542	1816	1690	1601	1534	1656	1579	1519	1624	1557	1505	1594	1537	1509
	6	1772	1626	1527	1457	1745	1611	1518	1451	1582	1501	1441	1555	1484	1430	1530	1468	1442
	7	1702	1550	1451	1382	1678	1537	1444	1377	1513	1430	1369	1490	1416	1361	1468	1403	1380
	8	1636	1480	1381	1314	1614	1469	1376	1311	1448	1364	1304	1429	1353	1298	1410	1343	1321
	9	1574	1415	1318	1252	1554	1406	1313	1250	1388	1304	1245	1371	1295	1240	1355	1286	1267
	10	1515	1355	1260	1196	1497	1347	1256	1194	1332	1248	1190	1317	1241	1187	1303	1233	1215

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	119.4 fc	4.5 ft
6.5 ft	85.5 fc	5.3 ft
7.5 ft	64.2 fc	6.1 ft
8.0 ft	56.4 fc	6.5 ft
10.0 ft	36.1 fc	8.1 ft
12.0 ft	25.1 fc	9.7 ft
14.0 ft	18.4 fc	11.4 ft
16.0 ft	14.1 fc	13.0 ft
20.0 ft	9.0 fc	16.2 ft
24.0 ft	6.3 fc	19.5 ft
28.0 ft	4.6 fc	22.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	791761	791761	791761
45.00°	7641	6572	6990
55.00°	2457	2171	2139
65.00°	2192	2391	1935
75.00°	4234	3397	3174
85.00°	4831	6663	3022

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	0.6	1.5	1.0	1.8	2.1	-0.2	0.7	0.2	1.1	1.4
	3H	3.6	4.4	4.0	4.7	5.1	2.8	3.6	3.2	3.9	4.3
	4H	5.8	6.5	6.2	6.9	7.3	4.6	5.3	5.0	5.7	6.1
	6H	7.3	7.9	7.7	8.3	8.8	5.9	6.6	6.4	7.0	7.4
	8H	7.8	8.4	8.2	8.8	9.2	6.3	6.9	6.8	7.3	7.8
	12H	8.1	8.7	8.6	9.1	9.6	6.6	7.2	7.0	7.6	8.0
4H	2H	1.4	2.1	1.8	2.5	2.9	0.7	1.4	1.1	1.8	2.2
	3H	4.6	5.2	5.1	5.7	6.1	3.9	4.5	4.3	4.9	5.4
	4H	7.2	7.7	7.6	8.1	8.6	5.8	6.3	6.2	6.8	7.2
	6H	8.9	9.4	9.4	9.9	10.4	7.2	7.6	7.6	8.1	8.6
	8H	9.5	9.9	10.0	10.4	10.9	7.5	8.0	8.0	8.4	8.9
	12H	9.9	10.3	10.4	10.8	11.3	7.9	8.2	8.4	8.7	9.2
8H	4H	7.7	8.2	8.2	8.6	9.1	6.2	6.6	6.7	7.1	7.6
	6H	9.8	10.1	10.3	10.7	11.2	7.6	8.0	8.2	8.5	9.0
	8H	10.6	10.9	11.1	11.4	11.9	8.1	8.4	8.6	8.9	9.4
	12H	11.2	11.4	11.7	11.9	12.5	8.6	8.8	9.1	9.3	9.9
12H	4H	7.8	8.2	8.3	8.7	9.2	6.2	6.6	6.7	7.1	7.6
	6H	10.0	10.3	10.5	10.8	11.3	7.7	8.0	8.2	8.5	9.0
	8H	10.8	11.1	11.4	11.6	12.2	8.2	8.4	8.7	8.9	9.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0