

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 GL (nadir)
Nom. 3" Round Downlight, Medium Beam

Test Number

SP-01393

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	1934
Efficacy	73.54 lm/W

Luminous Dimensions

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

Spacing Criterion

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

Full Beam Angle

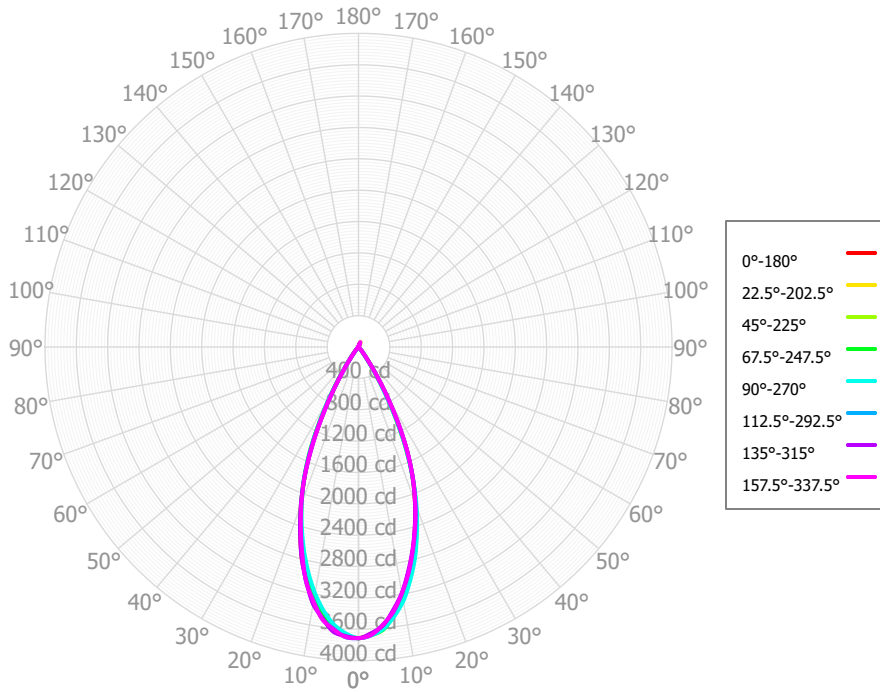
0° - 180°	44°
90° - 270°	44°

IES File Header Contents

Keyword	Value
TEST	SP-01393
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 GL (nadir)
LUMINAIRE	Nom. 3" Round Downlight, Medium Beam
OTHER	Matte White Trim, Clear Glass 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 GL (nadir)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	336.02	17.37%	90.00° - 100.00°	1.59	0.08%
10.00° - 20.00°	750.54	38.81%	100.00° - 110.00°	1.55	0.08%
20.00° - 30.00°	638.64	33.02%	100.00° - 120.00°	3.14	0.16%
30.00° - 40.00°	157.90	8.16%	120.00° - 130.00°	1.79	0.09%
40.00° - 50.00°	16.11	0.83%	130.00° - 140.00°	2.08	0.11%
50.00° - 60.00°	4.61	0.24%	140.00° - 150.00°	2.53	0.13%
60.00° - 70.00°	3.52	0.18%	150.00° - 160.00°	6.56	0.34%
70.00° - 80.00°	3.61	0.19%	160.00° - 170.00°	3.21	0.17%
80.00° - 90.00°	2.04	0.11%	170.00° - 180.00°	0.20	0.01%
0.00° - 90.00°	1912.99	98.91%	0.00° - 180.00°	1934.10	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°	3714.63	3714.63	3714.63	3714.63	3714.63	3714.63	3714.63	3714.63	3714.63	3714.63	3714.63	3714.63	3714.63	3714.63	3714.63	3714.63	3714.63
2.50°	3661.62	3676.06	3676.14	3680.90	3682.01	3706.54	3692.82	3705.04	3689.84	3690.46	3676.37	3670.00	3659.08	3679.48	3657.08	3678.99	3661.62
5.00°	3581.34	3573.90	3586.24	3621.33	3612.31	3609.72	3648.80	3616.45	3642.32	3598.15	3598.75	3601.13	3558.88	3559.03	3569.42	3557.59	3581.34
7.50°	3397.34	3423.91	3428.16	3453.64	3470.37	3502.26	3494.81	3511.11	3485.68	3471.48	3442.75	3420.41	3395.98	3415.27	3386.32	3407.85	3397.34
10.00°	3201.00	3213.12	3229.07	3274.43	3292.66	3294.08	3333.26	3300.04	3319.36	3268.67	3251.06	3231.89	3191.79	3191.23	3186.52	3189.90	3201.00
12.50°	2944.46	2975.80	2991.33	3028.41	3049.93	3079.18	3068.03	3078.32	3062.36	3041.54	3011.97	2986.13	2950.89	2955.22	2930.41	2952.06	2944.46
15.00°	2681.06	2712.87	2723.37	2768.39	2784.03	2765.00	2797.26	2762.61	2794.81	2749.05	2757.24	2729.91	2686.70	2690.39	2667.94	2678.62	2681.06
17.50°	2395.31	2431.92	2433.50	2457.37	2479.71	2451.06	2478.24	2444.44	2472.52	2442.83	2457.94	2428.63	2406.62	2417.63	2390.47	2401.47	2395.31
20.00°	2105.41	2137.59	2126.58	2139.15	2166.13	2139.17	2153.25	2129.10	2144.30	2130.39	2148.89	2123.31	2114.98	2130.88	2106.31	2119.33	2105.41
22.50°	1805.99	1813.68	1810.41	1802.41	1807.27	1811.83	1799.41	1804.18	1796.23	181719	1805.16	1806.09	1817.47	1817.23	1810.35	1811.34	1805.99
25.00°	1472.18	1473.03	1437.58	1442.00	1441.68	1409.98	1432.87	1399.06	1433.11	1423.21	1456.95	1463.84	1453.38	1467.45	1473.33	1476.63	1472.18
27.50°	1080.31	1098.53	1041.95	1036.70	1045.13	1017.54	1025.27	1003.64	1034.02	102711	1068.11	1067.94	1064.38	1104.79	1081.99	1117.69	1080.31
30.00°	725.54	710.02	696.83	67716	64708	654.86	657.27	653.83	675.96	680.54	679.71	707.29	716.79	728.81	729.44	739.73	725.54
32.50°	418.55	434.51	366.13	382.46	400.39	356.08	381.07	352.68	389.80	353.18	417.03	402.56	379.79	435.17	416.36	450.15	418.55
35.00°	212.96	191.70	211.02	187.89	167.08	202.92	179.10	205.47	191.44	212.84	171.42	193.47	214.57	206.12	215.18	213.56	212.96
37.50°	107.97	105.65	87.77	102.39	104.71	93.15	103.63	91.89	110.29	89.41	104.15	100.52	77.05	91.90	100.49	104.47	107.97
40.00°	50.85	49.33	53.41	51.90	48.71	56.17	52.10	54.95	57.74	55.99	44.78	46.00	45.27	45.45	45.32	51.69	50.85
42.50°	29.77	30.08	27.32	30.39	32.72	30.18	31.25	28.05	34.16	27.73	29.44	26.93	21.49	25.29	25.26	29.08	29.77
45.00°	17.75	14.70	17.72	17.83	18.68	18.29	18.51	18.00	19.30	17.09	16.42	15.96	15.44	16.73	15.34	16.09	17.75
47.50°	10.93	11.46	8.82	10.95	12.37	10.44	13.75	10.67	11.23	8.97	11.78	10.73	9.70	11.67	9.88	11.54	10.93
50.00°	8.01	8.60	7.53	7.38	7.55	6.53	9.92	6.78	7.20	6.98	8.04	7.83	7.14	7.72	7.35	8.75	8.01
52.50°	6.73	6.85	6.27	5.36	6.75	4.50	6.79	4.69	5.55	5.51	6.55	6.16	4.84	6.11	5.73	6.77	6.73
55.00°	5.51	5.21	5.17	4.36	5.81	3.88	5.26	4.37	4.72	4.99	5.39	5.03	4.31	4.99	4.81	4.88	5.51
57.50°	4.31	4.47	4.15	3.69	4.58	3.43	4.64	3.96	4.24	4.28	4.82	4.13	3.80	4.07	4.04	4.12	4.31
60.00°	4.01	3.82	3.49	3.50	3.73	3.08	4.14	3.50	4.05	3.34	4.24	3.73	3.35	3.18	4.00	3.44	4.01
62.50°	3.89	3.57	3.19	3.42	3.43	3.26	3.68	3.26	3.94	2.83	3.64	3.48	3.02	3.56	4.05	4.02	3.89
65.00°	4.11	3.35	4.01	3.19	3.13	3.68	3.50	3.14	3.84	2.79	3.34	3.12	2.98	3.98	4.51	4.48	4.11
67.50°	4.36	3.22	4.42	2.93	2.84	3.48	3.41	3.15	3.76	3.07	3.36	2.74	3.04	3.99	4.96	3.73	4.36
70.00°	4.12	3.23	3.92	3.30	2.57	3.10	3.60	3.20	3.86	3.61	3.59	2.86	3.31	3.99	4.44	3.23	4.12
72.50°	3.88	3.58	3.70	3.70	2.30	2.81	3.85	3.05	3.98	3.87	3.97	3.02	3.65	3.95	3.98	4.04	3.88
75.00°	3.89	3.64	3.93	3.48	2.47	2.55	3.37	2.85	3.56	3.95	3.58	3.54	4.11	3.93	4.10	4.47	3.89
77.50°	3.83	3.23	3.66	3.23	2.93	2.20	2.82	2.55	3.11	3.47	2.73	4.00	3.97	3.94	4.25	3.60	3.83
80.00°	3.20	2.75	2.76	2.67	2.53	1.85	1.93	2.23	2.61	2.74	2.15	3.24	3.14	3.65	4.55	2.80	3.20
82.50°	2.62	2.16	1.98	2.14	1.71	1.84	1.07	1.99	2.14	2.13	1.68	2.48	2.38	2.30	4.31	2.17	2.62
85.00°	2.21	1.70	1.29	1.82	1.64	1.84	1.32	1.74	1.96	1.55	1.46	1.74	1.68	1.37	2.23	1.66	2.21
87.50°	1.76	1.35	1.20	1.58	1.83	1.77	1.53	1.70	1.76	1.53	1.32	1.16	1.43	1.42	0.88	1.37	1.76
90.00°	1.19	1.29	1.54	1.62	1.78	1.73	1.49	1.67	1.43	1.62	1.40	1.32	1.48	1.45	1.26	1.17	1.19
92.50°	0.85	1.45	1.62	1.64	1.67	1.90	1.45	1.62	1.26	1.48	1.53	1.44	1.48	1.43	1.47	1.10	0.85
95.00°	1.04	1.43	1.57	1.59	1.74	1.96	1.42	1.56	1.58	1.32	1.53	1.51	1.46	1.37	1.38	1.19	1.04
97.50°	1.20	1.31	1.46	1.48	1.84	1.48	1.39	1.41	1.77	1.49	1.51	1.50	1.55	1.23	1.36	1.47	1.20
100.00°	1.31	1.28	1.33	1.25	1.77	1.11	1.32	1.31	1.68	1.67	1.43	1.36	1.68	1.30	1.41	1.50	1.31

SR3Mx 25L 35K MD xx xx RA3F 25L 35K MD
 MW GL (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	2297	2297	2297	2297	2242	2242	2242	2137	2137	2137	2042	2042	2042	1954	1954	1954	1913
	1	2204	2156	2113	2074	2155	2112	2074	2039	2031	2001	1973	1956	1933	1911	1887	1869	1852
	2	2113	2031	1963	1905	2070	1996	1935	1883	1931	1881	1838	1872	1832	1796	1816	1785	1756
	3	2026	1919	1836	1770	1988	1892	1816	1755	1839	1776	1724	1791	1739	1695	1746	1704	1667
	4	1944	1819	1728	1658	1910	1797	1712	1647	1754	1682	1626	1714	1654	1605	1678	1627	1585
	5	1866	1728	1632	1561	1835	1710	1620	1553	1674	1597	1538	1642	1575	1523	1611	1554	1508
	6	1792	1645	1547	1476	1765	1630	1538	1471	1600	1520	1459	1573	1502	1448	1547	1486	1437
	7	1722	1569	1470	1401	1697	1556	1463	1397	1531	1448	1388	1508	1435	1380	1486	1421	1372
	8	1656	1499	1401	1333	1633	1488	1395	1330	1467	1383	1323	1447	1372	1317	1428	1361	1311
	9	1593	1434	1337	1271	1573	1425	1332	1269	1406	1322	1264	1389	1313	1259	1373	1304	1254
	10	1534	1374	1278	1215	1516	1366	1274	1213	1350	1266	1209	1335	1259	1205	1321	1251	1201

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	122.8 fc	4.5 ft
6.5 ft	87.9 fc	5.3 ft
7.5 ft	66.0 fc	6.1 ft
8.0 ft	58.0 fc	6.5 ft
10.0 ft	37.1 fc	8.1 ft
12.0 ft	25.8 fc	9.7 ft
14.0 ft	19.0 fc	11.4 ft
16.0 ft	14.5 fc	13.0 ft
20.0 ft	9.3 fc	16.2 ft
24.0 ft	6.4 fc	19.5 ft
28.0 ft	4.7 fc	22.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	814545	814545	814545
45.00°	5504	5495	5793
55.00°	2107	1976	2221
65.00°	2131	2079	1625
75.00°	3292	3328	2097
85.00°	5561	3251	4118

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	-0.8	0.0	-0.5	0.4	0.7	-1.6	-0.7	-1.2	-0.4	0.0
	3H	2.2	3.0	2.6	3.3	3.7	0.9	1.7	1.3	2.1	2.5
	4H	4.0	4.7	4.5	5.1	5.5	2.7	3.4	3.1	3.8	4.2
	6H	5.7	6.4	6.1	6.8	7.2	4.7	5.3	5.1	5.7	6.1
	8H	6.3	6.9	6.8	7.3	7.8	5.3	5.9	5.7	6.3	6.7
	12H	6.9	7.5	7.4	7.9	8.4	5.8	6.4	6.2	6.8	7.2
4H	2H	0.1	0.9	0.6	1.2	1.7	-0.8	-0.1	-0.3	0.3	0.7
	3H	3.3	3.9	3.8	4.3	4.8	2.1	2.7	2.6	3.1	3.6
	4H	5.4	5.9	5.8	6.3	6.8	4.0	4.5	4.5	5.0	5.5
	6H	7.1	7.5	7.6	8.0	8.5	6.0	6.5	6.5	7.0	7.5
	8H	7.7	8.1	8.2	8.6	9.1	6.7	7.1	7.2	7.6	8.1
	12H	8.4	8.7	8.9	9.2	9.7	7.3	7.7	7.8	8.2	8.7
8H	4H	6.1	6.5	6.6	7.0	7.5	4.7	5.1	5.2	5.6	6.1
	6H	7.9	8.3	8.5	8.8	9.3	6.8	7.1	7.3	7.6	8.2
	8H	8.7	9.0	9.2	9.5	10.0	7.6	7.9	8.1	8.4	8.9
	12H	9.4	9.7	10.0	10.2	10.8	8.4	8.6	8.9	9.1	9.8
12H	4H	6.2	6.6	6.8	7.1	7.6	4.8	5.2	5.3	5.7	6.2
	6H	8.2	8.5	8.8	9.0	9.6	6.9	7.2	7.4	7.7	8.2
	8H	9.0	9.3	9.6	9.8	10.4	7.8	8.0	8.3	8.5	9.1

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0