

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01394_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	1966
Efficacy	74.74 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.77
Two luminaires, plane 90°	0.78
Four luminaires	0.73

Full Beam Angle

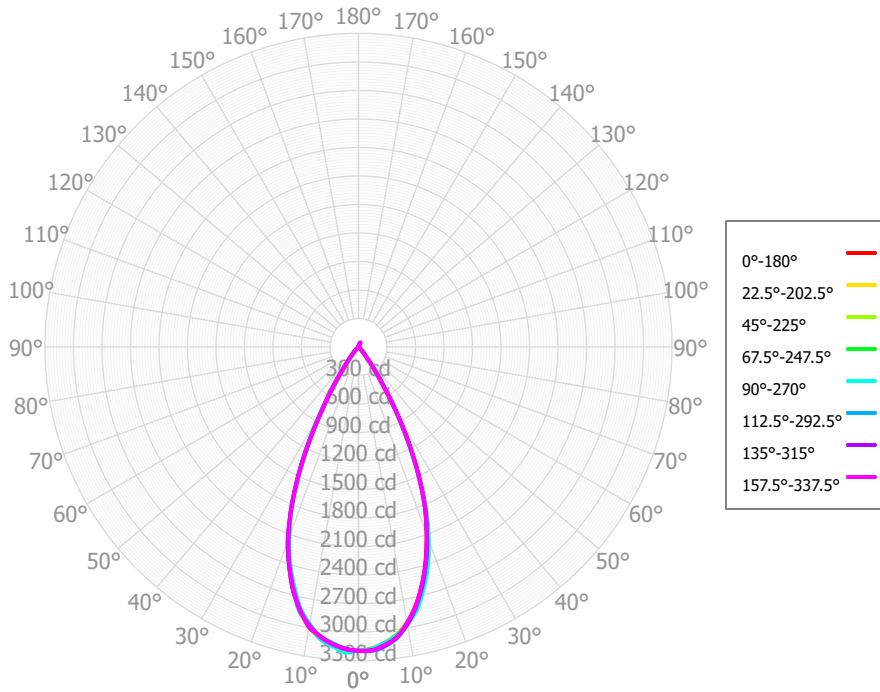
0° - 180°	48°
90° - 270°	49°

IES File Header Contents

Keyword	Value
TEST	SP-01394_4
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/7/2022
ISSUDATE	12/16/2022
LUMCAT	SR3Mx 25L 35K WD xx xx RA3F 25L 35K WD MW SO (nadir)
LUMINAIRE	Nom. 3" Round Downlight, Wide Beam
OTHER	Matte White Trim, Solite Lens
OTHER	48 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 WD xx xx RA3F 25L 35K WD
 MW SO (nadir)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	298.75	15.20%	90.00° - 100.00°	1.55	0.08%
10.00° - 20.00°	722.01	36.73%	100.00° - 110.00°	1.59	0.08%
20.00° - 30.00°	666.67	33.92%	100.00° - 120.00°	3.21	0.16%
30.00° - 40.00°	210.45	10.71%	120.00° - 130.00°	1.84	0.09%
40.00° - 50.00°	30.44	1.55%	130.00° - 140.00°	2.37	0.12%
50.00° - 60.00°	5.85	0.30%	140.00° - 150.00°	3.39	0.17%
60.00° - 70.00°	4.29	0.22%	150.00° - 160.00°	5.83	0.30%
70.00° - 80.00°	4.31	0.22%	160.00° - 170.00°	2.43	0.12%
80.00° - 90.00°	2.10	0.11%	170.00° - 180.00°	0.20	0.01%
0.00° - 90.00°	1944.86	98.94%	0.00° - 180.00°	1965.68	100.00%

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

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°	3198.13	3198.13	3198.13	3198.13	3198.13	3198.13	3198.13	3198.13	3198.13	3198.13	3198.13	3198.13	3198.13	3198.13	3198.13	3198.13	3198.13
2.50°	3180.18	3181.70	3179.93	3178.47	3182.05	3178.23	3177.41	3184.29	3184.65	3193.24	3193.89	3200.67	3217.73	3203.36	3194.00	3197.48	3180.18
5.00°	3139.71	3132.65	3127.05	3126.44	3128.93	3128.93	3139.80	3139.71	3154.06	3152.68	3153.23	3151.32	3160.71	3162.67	3159.04	3147.03	3139.71
7.50°	3059.53	3058.32	3060.85	3060.20	3068.27	3071.86	3071.79	3077.84	3081.53	3097.05	3087.72	3090.72	3099.41	3093.32	3081.39	3083.44	3059.53
10.00°	2946.48	2944.82	2943.67	2957.68	2963.02	2968.69	2990.70	2977.22	2996.43	2984.62	2981.33	2963.35	2961.52	2962.88	2963.55	2945.02	2946.48
12.50°	2782.33	2795.05	2812.35	2824.84	2838.94	2856.83	2834.90	2840.28	2836.17	2855.09	2837.39	2826.83	2818.97	2804.06	2797.46	2792.89	2782.33
15.00°	2585.97	2600.63	2608.49	2630.49	2639.80	2647.79	2654.91	2640.03	2659.21	2645.84	2643.03	2621.84	2609.42	2598.03	2596.48	2580.93	2585.97
17.50°	2349.85	2377.66	2390.69	2410.60	2424.17	2426.77	2423.93	2416.82	2420.75	2418.79	2414.06	2412.13	2393.04	2371.39	2362.02	2362.41	2349.85
20.00°	2095.85	2125.83	2120.67	2150.12	2158.94	2145.58	2181.10	2161.96	2173.44	2142.19	2148.03	2137.44	2127.09	2116.80	2104.88	2102.30	2095.85
22.50°	1823.71	1832.06	1844.04	1850.40	1863.62	1860.77	1853.30	1856.65	1845.23	1858.43	1839.37	1858.25	1848.04	1828.20	1830.36	1839.86	1823.71
25.00°	1504.70	1504.42	1488.80	1499.73	1499.91	1487.43	1511.69	1494.30	1510.96	1490.80	1493.17	1496.55	1506.60	1502.81	1509.58	1501.11	1504.70
27.50°	1147.74	1155.29	1128.89	1147.82	1141.90	1116.48	1136.39	1131.97	1136.93	1116.12	1136.36	1137.04	1163.25	1162.64	1159.87	1162.16	1147.74
30.00°	814.82	792.38	798.88	794.65	793.98	789.93	758.02	769.68	766.16	783.44	772.10	797.99	813.39	809.70	831.02	820.32	814.82
32.50°	497.83	512.69	476.75	519.15	508.45	481.09	512.37	498.05	508.53	457.63	498.81	481.66	506.10	528.50	512.39	496.88	497.83
35.00°	296.76	276.23	308.46	307.92	312.51	319.55	273.73	293.64	266.13	297.90	275.83	298.95	307.14	298.14	312.54	310.55	296.76
37.50°	156.09	158.00	152.29	178.78	177.25	174.15	184.70	173.21	175.51	147.29	157.55	142.44	153.88	166.67	158.85	146.67	156.09
40.00°	89.19	87.10	99.68	105.28	111.37	115.94	99.93	102.04	93.14	96.92	85.71	89.80	93.01	90.50	92.00	94.62	89.19
42.50°	51.92	53.46	52.48	62.26	65.80	64.97	65.96	61.23	61.53	51.07	50.88	46.61	48.90	52.15	50.17	50.13	51.92
45.00°	32.43	30.95	33.49	35.51	39.34	40.84	34.66	34.29	33.69	33.05	28.48	30.68	31.33	30.78	32.32	31.96	32.43
47.50°	18.47	19.82	17.30	21.40	22.40	21.16	21.83	20.67	21.33	17.35	17.65	17.69	18.59	19.14	19.29	17.25	18.47
50.00°	11.92	11.20	11.65	12.50	12.61	13.62	10.75	11.86	11.14	11.21	9.63	11.37	11.91	10.80	13.43	11.76	11.92
52.50°	7.01	8.09	7.09	8.05	8.05	7.65	7.54	7.95	7.62	6.50	6.97	6.92	7.74	8.17	8.53	7.65	7.01
55.00°	5.39	5.75	5.55	5.02	6.61	5.07	4.97	5.32	5.06	6.18	5.23	5.76	6.16	6.95	6.69	6.35	5.39
57.50°	4.24	5.05	4.43	4.76	5.72	3.59	4.50	4.37	4.74	5.58	4.98	4.97	4.99	6.19	5.06	5.44	4.24
60.00°	4.24	4.48	4.20	5.13	5.11	3.95	4.11	3.71	4.49	4.31	4.88	4.74	4.14	5.52	4.69	5.18	4.24
62.50°	4.32	4.39	3.78	4.49	4.65	4.12	3.94	4.08	4.36	3.54	4.24	4.61	4.03	5.26	4.35	4.91	4.32
65.00°	4.15	4.31	3.04	3.69	4.26	4.02	3.87	4.57	4.43	3.70	3.59	4.60	4.43	5.04	4.48	4.63	4.15
67.50°	3.98	4.24	2.85	3.92	4.33	3.97	3.95	4.63	4.77	4.00	4.11	4.51	4.81	5.09	4.64	4.63	3.98
70.00°	4.40	4.21	3.42	4.25	4.53	3.96	3.92	4.66	4.88	4.51	4.58	4.36	5.18	5.16	4.96	4.93	4.40
72.50°	4.73	4.65	3.73	4.89	4.23	3.99	3.69	4.46	4.72	4.53	4.40	4.08	5.01	5.18	5.18	4.87	4.73
75.00°	4.23	4.92	3.77	5.49	3.82	4.06	3.29	4.23	4.15	4.00	4.18	3.70	4.63	5.15	4.75	4.48	4.23
77.50°	3.71	4.19	3.45	4.23	3.56	3.58	2.68	3.71	3.19	3.35	3.56	3.43	4.07	4.40	4.26	4.04	3.71
80.00°	3.11	3.40	2.81	3.01	3.31	2.71	2.15	3.16	2.43	2.62	2.92	3.22	3.45	3.60	3.53	3.55	3.11
82.50°	2.47	2.35	2.31	2.18	2.36	2.04	1.70	2.44	1.82	2.04	2.23	2.62	2.52	2.46	2.79	2.81	2.47
85.00°	1.68	1.54	1.89	1.49	1.36	1.48	1.58	1.81	1.53	1.58	1.61	1.84	1.50	1.50	2.02	1.93	1.68
87.50°	1.13	1.45	1.67	1.77	1.32	1.45	1.74	1.61	1.42	1.42	1.27	1.52	1.40	1.40	1.53	1.49	1.13
90.00°	1.34	1.37	1.56	2.00	1.29	1.65	1.56	1.43	1.36	1.45	1.11	1.38	1.45	1.28	1.66	1.23	1.34
92.50°	1.47	1.32	1.41	2.03	1.27	1.70	1.17	1.30	1.31	1.42	1.39	1.44	1.50	1.09	1.59	1.15	1.47
95.00°	1.38	1.29	1.24	2.04	1.26	1.71	1.17	1.20	1.35	1.36	1.55	1.55	1.55	1.04	1.20	1.12	1.38
97.50°	1.33	1.32	1.28	2.04	1.39	1.67	1.37	1.13	1.42	1.35	1.46	1.64	1.49	1.36	1.11	1.36	1.33
100.00°	1.33	1.41	1.40	1.94	1.51	1.63	1.42	1.12	1.35	1.35	1.41	1.71	1.43	1.60	1.47	1.66	1.33

SR3Mx 25L 35K WD xx xx RA3F 25L 35K WD
 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%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	2335	2335	2335	2335	2278	2278	2278	2278	2173	2173	2173	2076	2076	2076	1987	1987	1987	1945
	1	2237	2186	2142	2101	2187	2142	2102	2066	2059	2028	1999	1983	1959	1936	1913	1894	1877	1855
	2	2140	2054	1983	1923	2096	2019	1954	1899	1953	1900	1855	1892	1850	1812	1836	1802	1772	1765
	3	2048	1936	1848	1779	2009	1907	1827	1763	1854	1787	1733	1805	1750	1703	1759	1714	1675	1680
	4	1961	1829	1732	1659	1926	1806	1717	1648	1762	1687	1627	1722	1658	1606	1684	1630	1586	1599
	5	1877	1732	1631	1556	1846	1713	1619	1548	1677	1595	1533	1643	1573	1518	1612	1552	1503	1523
	6	1799	1644	1540	1466	1770	1628	1531	1460	1598	1512	1449	1570	1495	1438	1543	1478	1427	1452
	7	1724	1563	1459	1385	1699	1550	1451	1381	1524	1436	1373	1500	1422	1364	1478	1409	1356	1385
	8	1654	1489	1385	1313	1631	1477	1379	1310	1455	1367	1303	1435	1355	1297	1415	1344	1291	1322
	9	1588	1420	1317	1248	1567	1410	1312	1245	1391	1302	1240	1374	1293	1235	1357	1284	1230	1264
	10	1526	1357	1256	1188	1506	1348	1251	1186	1332	1243	1182	1316	1235	1178	1302	1228	1174	1210

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	105.7 fc	4.9 ft
6.5 ft	75.7 fc	5.8 ft
7.5 ft	56.9 fc	6.7 ft
8.0 ft	50.0 fc	7.2 ft
10.0 ft	32.0 fc	9.0 ft
12.0 ft	22.2 fc	10.8 ft
14.0 ft	16.3 fc	12.6 ft
16.0 ft	12.5 fc	14.4 ft
20.0 ft	8.0 fc	18.0 ft
24.0 ft	5.6 fc	21.6 ft
28.0 ft	4.1 fc	25.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	701288	701288	701288
45.00°	10056	10386	12200
55.00°	2061	2122	2526
65.00°	2153	1576	2210
75.00°	3583	3196	3239
85.00°	4224	4760	3418

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	0.3	1.2	0.7	1.5	1.8	-0.5	0.4	-0.1	0.7	1.1
	3H	3.1	3.9	3.5	4.3	4.7	2.9	3.7	3.3	4.1	4.5
	4H	4.9	5.7	5.4	6.1	6.5	4.6	5.4	5.1	5.8	6.2
	6H	6.3	7.0	6.8	7.4	7.8	6.1	6.8	6.6	7.2	7.6
	8H	6.8	7.4	7.3	7.9	8.3	6.6	7.3	7.1	7.7	8.1
	12H	7.2	7.8	7.6	8.2	8.7	7.0	7.6	7.4	8.0	8.4
4H	2H	0.8	1.5	1.2	1.9	2.3	0.1	0.9	0.6	1.3	1.7
	3H	4.2	4.8	4.7	5.2	5.7	3.9	4.5	4.4	4.9	5.4
	4H	6.3	6.8	6.7	7.3	7.7	5.7	6.3	6.2	6.7	7.2
	6H	7.8	8.3	8.3	8.7	9.2	7.4	7.8	7.9	8.3	8.8
	8H	8.4	8.8	8.9	9.3	9.8	7.9	8.4	8.4	8.8	9.3
	12H	8.8	9.1	9.3	9.6	10.1	8.3	8.7	8.8	9.2	9.7
8H	4H	6.9	7.3	7.4	7.8	8.3	6.3	6.7	6.8	7.2	7.7
	6H	8.6	9.0	9.2	9.5	10.0	8.0	8.3	8.5	8.9	9.4
	8H	9.3	9.6	9.8	10.1	10.7	8.7	9.0	9.3	9.5	10.1
	12H	9.8	10.1	10.4	10.6	11.2	9.3	9.5	9.8	10.0	10.6
12H	4H	7.0	7.4	7.5	7.9	8.4	6.3	6.7	6.8	7.2	7.7
	6H	8.8	9.1	9.3	9.6	10.1	8.1	8.4	8.7	8.9	9.5
	8H	9.5	9.8	10.1	10.3	10.9	8.9	9.1	9.4	9.7	10.3

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0