

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SR3Mx 25L 35K ND xx xx RA3F 25L 35K ND MW NL (nadir)
Nom. 3" Round Downlight, Narrow Beam

Test Number

SP-01392_2

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	2116
Efficacy	80.46 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.58
Two luminaires, plane 90°	0.58
Four luminaires	0.58

Full Beam Angle

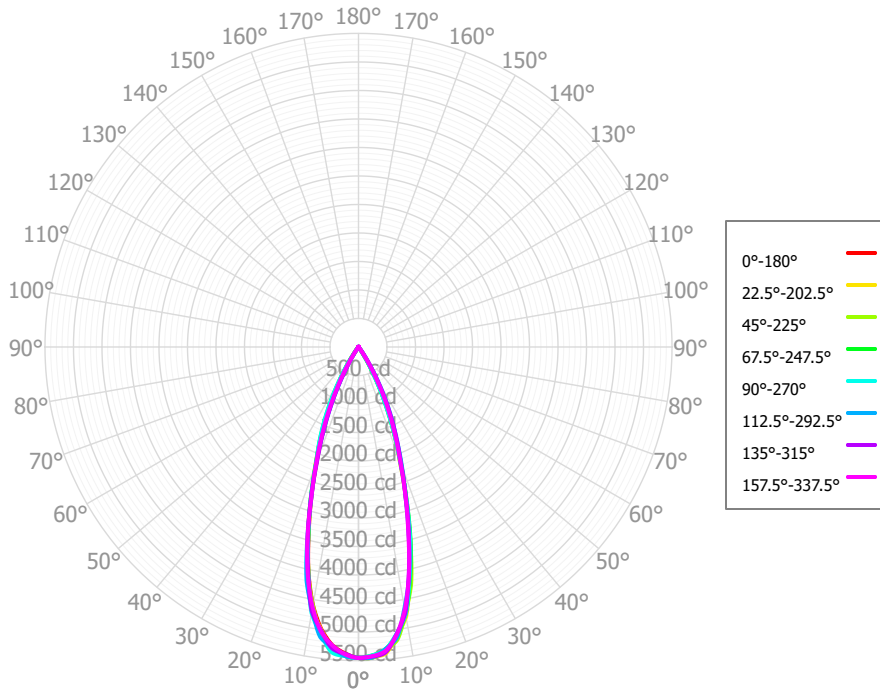
0° - 180°	35°
90° - 270°	35°

IES File Header Contents

Keyword	Value
TEST	SP-01392_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/7/2022
ISSUDATE	12/16/2022
LUMCAT	SR3Mx 25L 35K ND xx xx RA3F 25L 35K ND MW NL (nadir)
LUMINAIRE	Nom. 3" Round Downlight, Narrow Beam
OTHER	Matte White Trim, No Lens
OTHER	35 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 ND xx xx RA3F 25L 35K ND
 MW NL (nadir)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	493.87	23.34%	90.00° - 100.00°	1.35	0.06%
10.00° - 20.00°	929.36	43.92%	100.00° - 110.00°	1.32	0.06%
20.00° - 30.00°	568.30	26.85%	100.00° - 120.00°	2.92	0.14%
30.00° - 40.00°	96.41	4.56%	120.00° - 130.00°	1.71	0.08%
40.00° - 50.00°	4.76	0.22%	130.00° - 140.00°	2.29	0.11%
50.00° - 60.00°	2.60	0.12%	140.00° - 150.00°	2.07	0.10%
60.00° - 70.00°	2.79	0.13%	150.00° - 160.00°	1.31	0.06%
70.00° - 80.00°	3.65	0.17%	160.00° - 170.00°	0.59	0.03%
80.00° - 90.00°	2.06	0.10%	170.00° - 180.00°	0.18	0.01%
0.00° - 90.00°	2103.80	99.41%	0.00° - 180.00°	2116.22	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°	5452.94	5452.94	5452.94	5452.94	5452.94	5452.94	5452.94	5452.94	5452.94	5452.94	5452.94	5452.94	5452.94	5452.94	5452.94	5452.94	5452.94
2.50°	5455.49	5437.23	5456.03	5417.69	5416.56	5426.89	5387.17	5396.86	5381.39	5391.44	5415.94	5400.12	5427.29	5453.55	5436.96	5430.35	5455.49
5.00°	5348.02	5401.46	5329.76	5331.93	5337.17	5283.42	5308.22	5255.07	5252.68	5300.80	5266.51	5324.83	5376.86	5325.23	5383.36	5356.43	5348.02
7.50°	5157.77	5111.74	5187.62	5102.91	5082.06	5133.69	5015.59	5037.91	4993.63	5004.57	5060.66	5030.49	5066.60	5148.73	5088.22	5101.62	5157.77
10.00°	4725.92	4803.63	4735.91	4761.65	4761.56	4676.54	4713.50	4635.44	4601.14	4673.04	4602.26	4685.34	4740.62	4647.91	4735.26	4677.28	4725.92
12.50°	4150.64	4145.11	4263.13	4170.49	4140.46	4207.65	4074.39	4110.82	4055.03	4054.76	4092.29	4065.23	4073.59	4111.58	4074.44	4090.97	4150.64
15.00°	3474.46	3482.20	3510.95	3529.66	3499.94	3464.71	3434.07	3459.32	3375.24	3430.47	3402.84	3397.46	3402.13	3401.74	3415.92	3375.71	3474.46
17.50°	2747.52	2775.00	2755.34	2795.70	2790.28	2734.50	2767.62	2737.46	2744.31	2772.19	2753.60	2784.15	2783.37	2734.30	2766.65	2736.58	2747.52
20.00°	2186.64	2101.35	2181.14	2144.42	2131.40	2171.54	2116.85	2169.16	2149.46	2156.70	2216.60	2177.38	2178.77	2225.94	2171.22	2148.80	2186.64
22.50°	1694.96	1650.34	1615.09	1623.40	1617.27	1620.93	1634.47	1671.88	1656.88	1722.74	1720.64	1766.04	1788.74	1747.67	1749.59	1679.39	1694.96
25.00°	1271.02	1210.13	1188.46	1151.49	1135.81	1168.95	1163.34	1230.35	1228.10	1297.16	1318.56	1368.65	1399.50	1360.55	1337.71	1277.98	1271.02
27.50°	870.10	822.05	772.49	744.96	730.48	737.77	770.45	810.03	842.57	899.43	935.31	989.09	1017.28	985.86	951.28	905.66	870.10
30.00°	547.23	468.22	457.03	420.79	393.73	422.85	409.65	488.21	479.69	540.75	587.88	611.81	650.20	641.78	601.33	547.30	547.23
32.50°	245.50	243.71	172.92	189.71	189.63	153.37	209.76	196.66	251.98	286.70	309.34	357.51	373.90	350.65	329.78	306.46	245.50
35.00°	121.06	66.85	87.47	58.73	52.38	74.76	46.08	87.94	83.06	96.08	140.70	114.29	136.08	167.33	130.60	112.17	121.06
37.50°	34.29	33.04	16.13	24.99	24.83	13.46	23.65	23.39	27.23	45.09	35.87	61.58	69.41	43.40	61.16	43.25	34.29
40.00°	15.22	8.42	10.44	8.44	8.16	9.16	6.45	9.76	11.66	10.75	17.07	13.46	16.18	20.66	16.59	14.63	15.22
42.50°	6.70	6.20	5.87	6.09	6.57	5.75	5.47	5.39	7.47	6.96	6.48	10.17	10.26	7.05	9.97	7.04	6.70
45.00°	5.41	4.63	5.33	4.57	5.09	4.67	4.63	4.71	6.57	4.72	5.31	7.13	5.62	6.55	5.68	4.79	5.41
47.50°	4.87	4.35	4.70	3.63	3.72	3.66	4.16	4.51	5.30	4.91	4.48	5.67	4.62	5.78	4.40	4.37	4.87
50.00°	4.27	3.94	3.84	3.19	2.77	2.81	3.53	4.22	3.94	4.50	3.99	4.27	3.91	4.67	3.49	4.29	4.27
52.50°	3.66	3.31	3.03	3.05	2.24	2.19	2.58	3.92	3.41	3.32	3.62	3.15	3.88	3.70	2.98	3.76	3.66
55.00°	2.91	2.92	2.34	2.75	1.84	1.99	1.90	3.22	3.02	2.77	3.35	2.35	3.50	2.86	2.74	3.17	2.91
57.50°	2.18	2.86	1.90	2.37	1.55	2.07	1.69	2.50	3.07	2.94	3.06	2.74	2.46	2.55	2.74	3.24	2.18
60.00°	2.06	2.85	1.94	2.51	1.66	2.56	1.87	2.92	3.18	3.03	2.75	3.01	2.03	2.70	2.72	3.37	2.06
62.50°	1.98	2.89	2.11	2.86	2.08	2.59	2.60	3.34	3.18	3.03	2.62	2.92	2.59	2.67	2.66	3.25	1.98
65.00°	2.52	2.92	2.49	2.99	2.17	2.01	2.98	3.45	3.18	3.43	2.58	2.89	2.99	2.49	2.60	3.11	2.52
67.50°	3.07	2.93	2.83	3.06	2.07	1.79	2.90	3.53	3.30	4.15	2.74	2.99	3.19	2.50	2.54	3.02	3.07
70.00°	3.64	3.14	3.11	2.72	2.14	1.98	2.94	3.27	3.42	4.57	2.99	3.02	3.22	2.63	3.05	2.94	3.64
72.50°	4.12	3.53	3.39	2.28	2.31	2.53	3.08	3.06	3.81	4.78	3.28	2.90	3.07	3.33	3.89	3.18	4.12
75.00°	4.14	3.71	3.66	2.71	2.70	3.43	3.21	3.26	4.18	4.76	3.59	3.03	2.91	4.33	4.00	3.47	4.14
77.50°	3.95	3.74	3.62	3.32	3.19	3.30	3.31	3.38	4.47	4.60	4.23	3.57	2.76	4.35	3.77	4.17	3.95
80.00°	2.89	3.04	3.26	2.59	2.56	2.31	2.91	3.02	4.56	3.87	4.98	3.52	2.60	3.93	3.24	4.58	2.89
82.50°	2.02	1.86	2.62	1.67	1.53	1.76	2.12	2.57	2.80	2.86	3.52	2.61	2.43	2.78	2.59	2.74	2.02
85.00°	1.76	1.31	1.72	1.27	1.19	1.49	1.69	1.77	1.28	2.09	1.44	1.87	1.97	1.36	2.09	1.22	1.76
87.50°	1.50	1.09	1.29	0.93	1.05	1.40	1.50	1.19	1.32	1.41	1.15	1.33	1.31	1.04	1.63	1.41	1.50
90.00°	1.23	1.09	1.19	1.09	1.17	1.40	1.43	1.30	1.35	1.16	1.23	1.09	1.10	1.03	1.39	1.52	1.23
92.50°	1.05	1.18	1.34	1.28	1.36	1.41	1.44	1.35	1.35	1.05	1.27	1.15	1.17	1.06	1.22	1.29	1.05
95.00°	1.07	1.27	1.63	1.25	1.25	1.41	1.20	1.26	1.35	1.14	1.30	1.20	1.19	1.10	1.22	1.13	1.07
97.50°	1.13	1.37	1.49	1.23	1.09	1.26	0.85	1.23	1.31	1.29	1.44	1.22	1.20	1.12	1.26	1.21	1.13
100.00°	1.29	1.28	1.13	1.12	1.08	1.05	0.90	1.29	1.29	1.43	1.59	1.14	1.14	1.15	1.13	1.30	1.29

SR3Mx 25L 35K ND xx xx RA3F 25L 35K ND
 MW NL (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%	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	2516	2516	2516	2516	2456	2456	2456	2456	2344	2344	2344	2242	2242	2242	2148	2148	2148	2104
	1	2421	2372	2328	2289	2369	2326	2287	2251	2239	2208	2180	2159	2135	2113	2086	2067	2051	2026
	2	2331	2247	2178	2120	2286	2211	2148	2095	2142	2092	2048	2079	2039	2003	2021	1989	1960	1950
	3	2246	2137	2053	1986	2206	2108	2032	1970	2053	1990	1938	2003	1950	1906	1956	1913	1876	1876
	4	2165	2039	1947	1876	2130	2015	1930	1865	1971	1899	1842	1930	1869	1820	1891	1841	1799	1807
	5	2088	1950	1853	1782	2057	1931	1841	1774	1894	1817	1758	1861	1794	1742	1829	1772	1726	1741
	6	2016	1869	1770	1699	1988	1853	1761	1693	1823	1742	1682	1795	1724	1670	1768	1707	1659	1678
	7	1947	1794	1695	1626	1922	1781	1688	1621	1756	1673	1613	1732	1659	1604	1710	1645	1596	1618
	8	1882	1726	1627	1560	1860	1714	1621	1556	1693	1609	1550	1673	1598	1543	1654	1587	1537	1562
	9	1821	1662	1565	1499	1801	1652	1560	1496	1634	1550	1491	1617	1541	1486	1600	1532	1481	1509
	10	1763	1603	1507	1443	1744	1594	1503	1441	1578	1495	1437	1563	1487	1433	1549	1480	1429	1459

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	180.3 fc	3.5 ft
6.5 ft	129.1 fc	4.1 ft
7.5 ft	96.9 fc	4.8 ft
8.0 ft	85.2 fc	5.1 ft
10.0 ft	54.5 fc	6.3 ft
12.0 ft	37.9 fc	7.6 ft
14.0 ft	27.8 fc	8.9 ft
16.0 ft	21.3 fc	10.1 ft
20.0 ft	13.6 fc	12.7 ft
24.0 ft	9.5 fc	15.2 ft
28.0 ft	7.0 fc	17.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1195724	1195724	1195724
45.00°	1677	1652	1578
55.00°	1114	897	702
65.00°	1309	1293	1127
75.00°	3505	3101	2288
85.00°	4430	4339	2994

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	-3.8	-2.9	-3.4	-2.6	-2.2	-5.2	-4.3	-4.8	-3.9	-3.6
	3H	0.1	0.9	0.5	1.3	1.6	-1.2	-0.4	-0.8	-0.1	0.3
	4H	2.8	3.6	3.3	3.9	4.3	1.1	1.8	1.5	2.2	2.6
	6H	5.0	5.7	5.5	6.1	6.5	3.4	4.1	3.9	4.5	4.9
	8H	5.6	6.2	6.0	6.6	7.0	4.2	4.8	4.6	5.2	5.6
	12H	6.0	6.6	6.4	7.0	7.4	4.8	5.4	5.2	5.8	6.2
4H	2H	-3.0	-2.3	-2.6	-2.0	-1.5	-3.8	-3.1	-3.3	-2.7	-2.3
	3H	1.3	1.9	1.8	2.3	2.8	0.2	0.8	0.7	1.2	1.7
	4H	4.1	4.6	4.6	5.1	5.5	2.8	3.3	3.2	3.7	4.2
	6H	6.6	7.0	7.1	7.5	8.0	5.2	5.6	5.7	6.1	6.6
	8H	7.2	7.6	7.7	8.0	8.5	6.0	6.4	6.5	6.8	7.3
	12H	7.6	8.0	8.1	8.5	9.0	6.6	7.0	7.1	7.5	8.0
8H	4H	5.0	5.4	5.5	5.9	6.4	4.1	4.5	4.6	4.9	5.4
	6H	7.6	7.9	8.1	8.4	8.9	6.6	6.9	7.1	7.4	7.9
	8H	8.3	8.6	8.8	9.1	9.6	7.4	7.7	7.9	8.2	8.7
	12H	8.8	9.1	9.3	9.6	10.2	8.1	8.4	8.7	8.9	9.5
12H	4H	5.2	5.5	5.7	6.0	6.5	4.4	4.8	4.9	5.3	5.8
	6H	7.8	8.1	8.3	8.6	9.1	7.0	7.3	7.5	7.7	8.3
	8H	8.6	8.8	9.1	9.3	9.9	7.9	8.1	8.4	8.6	9.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0