

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

SR3Mx 25L 35K MD xx xx RDD3F 25L 35K MD MW GL
Nom. 3" Round Deep Downlight A-Spec, Medium Beam

Test Number

SP-01409

Test Date

9/19/2022

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

Summary of Results

Power

Input Watts	26.3 W
-------------	--------

Lumen Output

Output Lumens	2375
Efficacy	90.29 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.48
Two luminaires, plane 90°	0.48
Four luminaires	0.49

Full Beam Angle

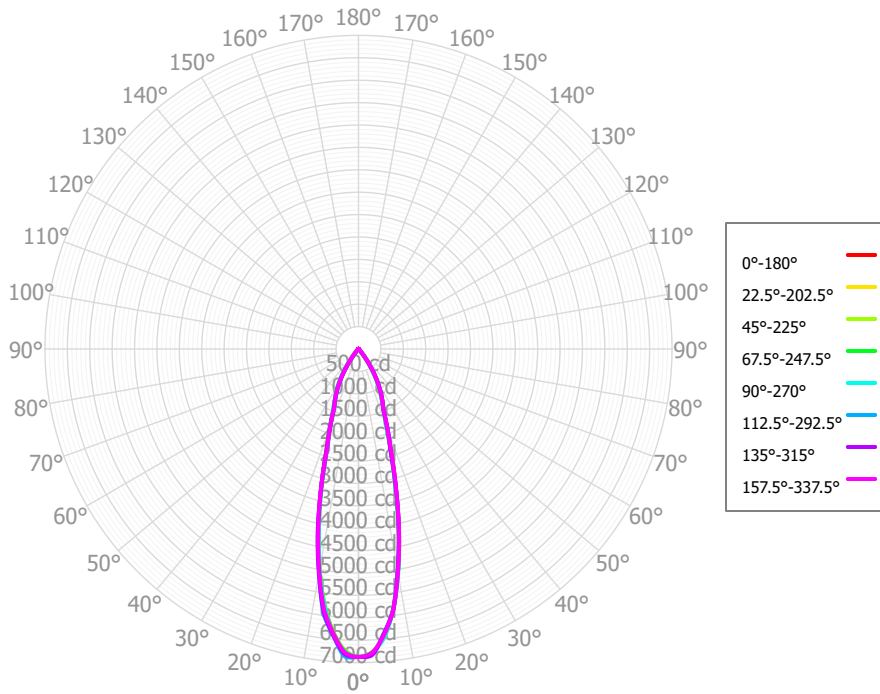
0° - 180°	29°
90° - 270°	29°

IES File Header Contents

Keyword	Value
TEST	SP-01409
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/19/2022
ISSUDATE	10/25/2022
LUMCAT	SR3Mx 25L 35K MD xx xx RDD3F 25L 35K MD MW GL
LUMINAIRE	Nom. 3" Round Deep Downlight A-Spec, Medium Beam
OTHER	Matte White Trim, Clear Glass lens
OTHER	29 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 RDD3F 25L 35K MD
MW GL

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	575.08	24.22%	90.00° - 100.00°	1.82	0.08%
10.00° - 20.00°	877.05	36.94%	100.00° - 110.00°	1.86	0.08%
20.00° - 30.00°	570.95	24.04%	100.00° - 120.00°	3.62	0.15%
30.00° - 40.00°	263.60	11.10%	120.00° - 130.00°	1.71	0.07%
40.00° - 50.00°	42.43	1.79%	130.00° - 140.00°	1.52	0.06%
50.00° - 60.00°	17.10	0.72%	140.00° - 150.00°	1.40	0.06%
60.00° - 70.00°	10.26	0.43%	150.00° - 160.00°	1.08	0.05%
70.00° - 80.00°	3.90	0.16%	160.00° - 170.00°	0.65	0.03%
80.00° - 90.00°	2.17	0.09%	170.00° - 180.00°	0.21	0.01%
0.00° - 90.00°	2362.55	99.49%	0.00° - 180.00°	2374.56	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°	6876.08	6876.08	6876.08	6876.08	6876.08	6876.08	6876.08	6876.08	6876.08	6876.08	6876.08	6876.08	6876.08	6876.08	6876.08	6876.08	6876.08
2.50°	6788.80	6778.90	6796.32	6786.78	6796.24	6872.22	6824.69	6790.05	6770.73	6744.71	6767.53	6759.48	6784.46	6833.17	6843.34	6793.48	6788.80
5.00°	6448.81	6482.50	6458.65	6478.12	6479.67	6432.24	6425.90	6391.46	6368.82	6377.32	6368.46	6382.61	6407.09	6396.02	6399.92	6431.37	6448.81
7.50°	5899.71	5873.97	5891.76	5884.23	5894.05	5965.14	5931.30	5872.89	5817.30	5776.73	5802.84	5787.52	5814.33	5888.79	5906.56	5894.01	5899.71
10.00°	5072.69	5069.38	5065.38	5075.54	5092.68	5076.33	5088.30	5054.46	5014.52	5004.29	5001.01	5000.99	5019.34	5025.07	5039.32	5062.62	5072.69
12.50°	4178.71	4152.54	4159.22	4154.54	4169.94	4182.35	4209.83	4152.95	4119.15	4088.89	4091.79	4081.24	4092.40	4149.05	4150.07	4182.00	4178.71
15.00°	3213.33	3179.21	3180.47	3165.10	3169.44	3219.11	3233.79	3243.88	3234.59	3220.27	3213.04	3210.42	3215.35	3229.10	3250.23	3235.58	3213.33
17.50°	2440.63	2437.72	2413.36	2416.83	2412.53	2303.71	2396.40	2333.33	2353.04	2383.23	2344.88	2366.63	2364.05	2414.34	2371.33	2455.54	2440.63
20.00°	1835.46	1786.50	1800.66	1784.16	1780.83	1829.86	1851.97	1853.70	1862.73	1847.88	1846.44	1847.55	1850.68	1879.17	1891.81	1856.49	1835.46
22.50°	1457.31	1463.27	1437.13	1447.00	1441.75	1399.53	1438.74	1426.14	1449.02	1473.96	1444.50	1470.83	1474.89	1454.21	1443.04	1461.78	1457.31
25.00°	1239.64	1235.66	1220.47	1220.86	1221.35	1211.38	1243.45	1227.65	1241.08	1241.01	1235.12	1247.30	1252.92	1258.79	1257.75	1245.72	1239.64
27.50°	1031.55	1024.76	1009.45	1007.17	1010.10	1018.34	1041.14	1042.96	1059.29	1066.75	1060.36	1075.88	1079.08	1060.81	1068.36	1040.99	1031.55
30.00°	828.85	817.41	801.08	796.96	801.64	806.53	829.42	830.52	842.66	860.45	860.08	874.58	873.77	858.58	856.63	844.18	828.85
32.50°	618.14	603.87	589.84	585.83	592.86	595.70	614.53	617.94	623.88	643.87	657.04	665.85	661.38	651.49	643.49	635.31	618.14
35.00°	403.92	389.45	377.56	374.52	384.01	387.69	396.17	403.87	412.33	430.71	443.45	454.34	448.12	437.96	424.99	419.63	403.92
37.50°	246.30	236.65	228.77	227.90	237.03	216.54	233.55	203.97	207.16	218.35	229.87	242.36	234.73	263.76	236.98	256.40	246.30
40.00°	107.95	88.42	96.94	89.52	99.17	126.53	119.91	127.09	129.81	132.29	144.45	147.53	142.13	131.42	135.33	116.72	107.95
42.50°	66.54	67.22	63.23	65.70	69.21	64.09	64.30	60.36	59.05	66.36	63.25	64.80	59.79	62.28	61.59	66.23	66.54
45.00°	49.29	48.22	48.18	49.00	47.85	49.92	49.53	49.28	48.71	49.25	49.56	47.99	47.50	47.98	48.42	46.34	49.29
47.50°	38.00	37.44	38.04	39.28	38.75	38.15	38.44	38.45	38.61	36.54	36.55	33.96	36.96	35.75	36.85	35.03	38.00
50.00°	27.72	27.12	28.48	29.85	30.05	29.70	29.44	28.56	29.84	28.21	28.75	27.71	28.01	24.96	28.08	25.88	27.72
52.50°	23.10	21.42	24.11	25.36	25.21	23.19	24.33	20.35	22.05	20.14	21.76	21.62	19.59	18.87	21.18	20.52	23.10
55.00°	19.07	16.44	20.02	21.07	20.53	18.87	20.95	16.86	17.98	17.11	18.86	17.80	17.10	15.42	16.86	15.83	19.07
57.50°	15.88	15.88	17.53	18.72	17.63	16.24	16.87	14.29	14.67	14.26	16.29	14.30	14.82	13.43	14.29	13.98	15.88
60.00°	12.74	14.98	15.01	16.39	14.74	15.13	12.53	13.72	13.55	13.51	14.89	13.25	13.93	12.06	13.63	12.43	12.74
62.50°	11.18	12.72	11.71	14.13	11.92	13.34	11.54	12.96	12.03	12.66	13.26	12.21	12.62	11.30	12.33	11.73	11.18
65.00°	9.58	10.44	8.61	11.72	9.45	11.05	11.39	11.87	9.61	11.12	11.05	11.18	9.48	10.73	10.46	11.05	9.58
67.50°	7.55	8.10	7.12	8.69	8.42	8.91	8.78	9.80	7.92	9.53	8.83	9.75	6.79	9.05	8.50	8.60	7.55
70.00°	5.60	5.85	5.67	6.01	6.96	6.85	5.72	6.38	7.48	7.76	6.60	7.00	5.46	7.09	6.47	6.22	5.60
72.50°	4.28	3.81	4.43	4.34	4.09	4.99	4.45	4.07	6.28	5.89	4.61	4.72	4.24	4.75	4.75	4.81	4.28
75.00°	3.20	2.39	3.29	3.19	2.02	3.22	3.37	2.97	4.03	3.72	3.01	3.67	3.30	2.34	3.20	3.47	3.20
77.50°	3.28	2.11	2.47	3.20	1.85	2.80	2.96	2.45	2.57	2.11	2.11	2.89	2.71	2.61	2.74	2.60	3.28
80.00°	3.18	1.90	1.97	2.90	1.72	2.86	2.58	2.44	1.99	1.91	2.15	2.68	2.76	3.17	2.77	1.93	3.18
82.50°	2.49	1.81	2.38	2.05	1.68	2.27	2.23	2.32	1.70	1.86	2.17	2.35	2.64	2.68	2.43	2.25	2.49
85.00°	1.87	1.88	2.49	1.57	1.58	1.50	1.88	2.11	1.68	2.10	2.17	1.85	2.25	2.16	1.95	2.37	1.87
87.50°	1.48	2.13	1.95	1.62	1.37	1.39	1.66	1.97	1.61	2.07	2.15	1.46	1.93	1.95	1.70	1.77	1.48
90.00°	1.31	2.10	1.53	1.70	1.36	1.41	1.49	1.87	1.51	1.61	2.11	1.22	1.70	1.77	1.51	1.35	1.31
92.50°	1.61	1.78	1.34	1.83	1.60	1.69	1.77	1.77	1.35	1.31	2.05	1.32	1.85	1.86	1.72	1.35	1.61
95.00°	1.73	1.55	1.23	1.99	1.64	2.00	2.00	1.69	1.15	1.19	1.98	1.78	2.39	1.90	1.99	1.44	1.73
97.50°	1.53	1.37	1.24	2.17	1.51	1.89	1.99	1.51	1.34	1.35	1.91	1.80	2.40	1.62	1.70	1.72	1.53
100.00°	1.44	1.43	1.50	2.18	1.60	1.75	1.96	1.31	1.71	1.80	1.84	1.46	1.99	1.42	1.35	1.83	1.44

SR3Mx 25L 35K MD xx xx RDD3F 25L 35K MD
 MW GL

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	2824	2824	2824	2824	2757	2757	2757	2757	2632	2632	2632	2517	2517	2517	2412	2412	2412	2363
	1	2711	2654	2602	2556	2653	2602	2556	2514	2504	2468	2435	2415	2387	2360	2332	2311	2291	2264
	2	2602	2503	2421	2352	2551	2462	2388	2325	2385	2325	2273	2314	2265	2223	2248	2209	2175	2166
	3	2499	2370	2270	2190	2453	2337	2245	2172	2275	2199	2136	2218	2155	2102	2164	2113	2069	2073
	4	2401	2251	2140	2056	2360	2224	2122	2044	2174	2087	2019	2127	2054	1995	2083	2022	1971	1985
	5	2309	2143	2028	1943	2273	2122	2014	1934	2080	1987	1916	2042	1962	1899	2006	1937	1882	1903
	6	2222	2046	1929	1844	2190	2028	1918	1838	1994	1897	1825	1962	1877	1812	1932	1858	1800	1826
	7	2140	1958	1840	1757	2111	1943	1831	1752	1914	1815	1743	1887	1799	1733	1861	1784	1724	1754
	8	2064	1877	1760	1680	2038	1864	1753	1676	1840	1740	1669	1817	1727	1662	1795	1715	1655	1688
	9	1992	1803	1688	1610	1968	1792	1682	1607	1771	1671	1601	1751	1661	1596	1733	1651	1590	1626
	10	1924	1735	1621	1546	1903	1725	1617	1544	1707	1608	1539	1690	1599	1535	1674	1591	1531	1568

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	227.3 fc	2.8 ft
6.5 ft	162.7 fc	3.3 ft
7.5 ft	122.2 fc	3.9 ft
8.0 ft	107.4 fc	4.1 ft
10.0 ft	68.8 fc	5.1 ft
12.0 ft	47.8 fc	6.2 ft
14.0 ft	35.1 fc	7.2 ft
16.0 ft	26.9 fc	8.2 ft
20.0 ft	17.2 fc	10.3 ft
24.0 ft	11.9 fc	12.3 ft
28.0 ft	8.8 fc	14.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1507791	1507791	1507791
45.00°	15284	14941	14840
55.00°	7291	7653	7848
65.00°	4973	4467	4901
75.00°	2715	2786	1713
85.00°	4711	6264	3964

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	7.2	8.1	7.6	8.4	8.8	7.4	8.3	7.8	8.6	9.0
	3H	8.2	9.0	8.6	9.4	9.8	8.5	9.3	8.9	9.7	10.1
	4H	8.4	9.1	8.8	9.5	9.9	8.7	9.4	9.1	9.8	10.2
	6H	8.7	9.3	9.1	9.7	10.1	8.8	9.5	9.2	9.9	10.3
	8H	8.8	9.5	9.3	9.9	10.3	8.9	9.5	9.4	9.9	10.4
	12H	9.0	9.6	9.4	10.0	10.4	9.1	9.7	9.5	10.1	10.5
4H	2H	7.5	8.3	7.9	8.6	9.0	7.9	8.6	8.3	9.0	9.4
	3H	8.7	9.3	9.1	9.7	10.1	9.1	9.7	9.5	10.1	10.5
	4H	8.9	9.4	9.3	9.8	10.3	9.3	9.8	9.7	10.3	10.7
	6H	9.2	9.7	9.7	10.1	10.6	9.5	10.0	10.0	10.4	10.9
	8H	9.4	9.9	9.9	10.3	10.8	9.7	10.1	10.2	10.6	11.1
	12H	9.7	10.1	10.2	10.6	11.1	9.9	10.3	10.4	10.8	11.3
8H	4H	8.9	9.3	9.4	9.8	10.3	9.3	9.7	9.8	10.2	10.7
	6H	9.3	9.7	9.8	10.2	10.7	9.7	10.0	10.2	10.5	11.0
	8H	9.6	9.9	10.2	10.5	11.0	9.9	10.2	10.5	10.8	11.3
	12H	10.1	10.4	10.6	10.9	11.5	10.3	10.6	10.8	11.1	11.7
12H	4H	8.9	9.2	9.4	9.7	10.2	9.2	9.6	9.7	10.1	10.6
	6H	9.4	9.7	9.9	10.1	10.7	9.7	10.0	10.2	10.5	11.0
	8H	9.8	10.0	10.3	10.5	11.1	10.0	10.3	10.6	10.8	11.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0