

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SR3Mx 25L 35K EB2 xx xx RDD3x 25L 35K EB2 MW xx
3 inch A-Spec deep downlight, medium beam, matte white finish, hallway optic,
spread lens

Test Number

SP-01426

Test Date

10/26/2022

The results contained in this report pertain only to this IFC file

SR3Mx 25L 35K EB2 xx xx RDD3x 25L 35K
EB2 MW xx

Summary of Results

Power

Input Watts	26.3 W
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Lumen Output

Output Lumens	2400
Efficacy	91.27 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.94
Two luminaires, plane 90°	0.54
Four luminaires	0.72

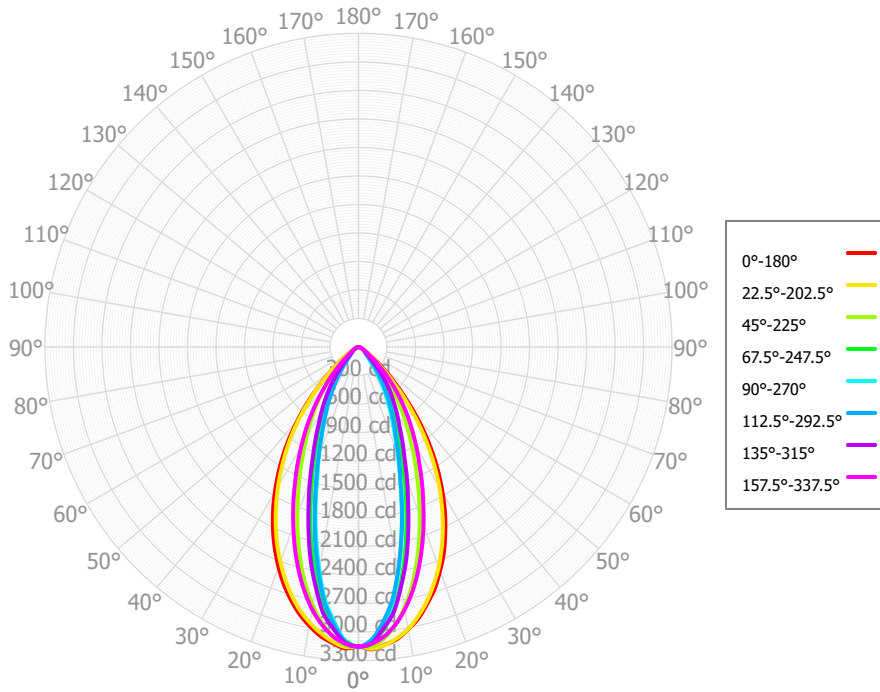
Full Beam Angle

0° - 180°	64°
90° - 270°	33°

IES File Header Contents

Keyword	Value
TEST	SP-01426
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/26/2022
ISSUEDATE	12/19/2022
LUMCAT	SR3Mx 25L 35K EB2 xx xx RDD3x 25L 35K EB2 MW xx
LUMINAIRE	3 inch A-Spec deep downlight, medium beam, matte white finish, hallway optic, spread lens
OTHER	Asymmetric Beam Angle (Horiz Axis 0-180 × 90-270): 64.4 × 33.0 Deg
OTHER	Asymmetric Field Angle (Horiz Axis 0-180 × 90-270): 101.2 × 73.7 Deg
OTHER	Reference Project SL167
LAMPCAT	N/A
LAMP	N/A, 19mm LES
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

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	281.57	11.73%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	614.79	25.61%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	632.56	26.35%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	478.81	19.95%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	240.70	10.03%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	92.59	3.86%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	42.75	1.78%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	13.18	0.55%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	3.31	0.14%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2400.27	100.00%	0.00° - 180.00°	2400.27	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°	3153.71	3153.71	3153.71	3153.71	3153.71	3153.71	3153.71	3153.71	3153.71	3153.71	3153.71	3153.71	3153.71	3153.71	3153.71	3153.71	3153.71
2.50°	3185.70	3179.76	3155.90	3106.30	3121.43	3105.26	3122.07	312711	3175.11	3161.58	3145.93	3095.94	3104.90	3087.06	3125.92	3128.09	3185.70
5.00°	3148.02	3151.62	3079.48	2993.79	2936.47	2937.03	2983.57	3059.52	3128.14	3112.60	3058.01	2975.11	2907.70	2914.28	2977.03	3060.16	3148.02
7.50°	3101.78	3093.12	2957.49	2792.17	2725.52	2720.24	2831.73	2948.79	3068.45	3038.71	2933.91	2777.23	2693.86	2696.83	2822.46	2952.00	3101.78
10.00°	3015.65	3013.79	2786.57	2541.31	2405.58	2416.60	2576.71	2806.42	2978.74	2946.74	2763.24	2532.72	2378.66	2397.54	2568.26	2805.47	3015.65
12.50°	2923.73	2902.98	2585.89	2251.11	2083.77	2103.63	2316.02	2630.34	2876.83	2840.98	2570.45	2243.84	2060.18	2077.99	2310.60	2631.12	2923.73
15.00°	2796.84	2774.77	2359.16	1943.94	1756.24	1777.23	2027.39	2434.57	2752.94	2710.78	2348.48	1954.98	1747.79	1770.74	2020.60	2431.84	2796.84
17.50°	2667.43	2625.78	2123.81	1661.93	1454.34	1484.67	1746.15	2223.47	2616.73	2565.47	2115.66	1666.14	1442.01	1465.60	1737.55	2218.18	2667.43
20.00°	2508.06	2467.82	1882.33	1388.33	1212.80	1231.20	1491.13	2005.34	2462.71	2405.72	1885.47	1416.61	1220.02	1242.97	1494.66	2000.80	2508.06
22.50°	2347.05	2288.11	1656.53	1178.21	998.57	1021.28	1254.98	1792.25	2300.30	2238.93	1656.01	1191.38	1007.21	1028.79	1265.46	1781.72	2347.05
25.00°	2160.31	2101.13	1439.59	983.56	835.25	851.79	1068.74	1580.97	2128.40	2060.81	1454.11	1015.65	859.30	884.09	1090.25	1581.00	2160.31
27.50°	1972.01	1902.90	1249.40	839.08	687.71	706.79	900.58	1388.54	1947.50	1878.37	1257.53	864.00	717.19	742.73	928.65	1386.85	1972.01
30.00°	1768.95	1701.92	1071.06	702.85	563.48	580.29	769.88	1201.20	1758.30	1691.71	1097.80	741.47	601.75	625.85	807.23	1219.75	1768.95
32.50°	1565.03	1492.28	916.95	590.95	450.47	467.73	645.21	1030.51	1567.20	1503.84	942.68	630.08	490.32	510.21	691.90	1059.81	1565.03
35.00°	1356.45	1281.21	771.17	481.46	350.72	363.69	530.36	862.93	1374.71	1319.12	808.15	525.98	392.37	412.76	590.32	915.29	1356.45
37.50°	1147.46	1072.47	638.04	376.05	264.70	276.89	420.26	711.32	1177.26	1135.05	674.94	423.98	300.07	317.52	486.90	773.60	1147.46
40.00°	936.99	863.95	508.16	271.40	191.93	198.40	316.34	561.55	977.01	949.22	555.72	327.25	222.00	238.71	380.17	642.30	936.99
42.50°	737.27	680.55	394.48	205.08	145.18	153.11	232.80	444.19	791.29	763.15	437.72	231.61	160.24	167.58	285.63	512.20	737.27
45.00°	567.05	498.99	283.67	141.65	118.87	120.12	170.85	328.71	612.05	605.52	341.62	176.04	130.83	134.21	208.40	401.65	567.05
47.50°	414.28	370.11	210.99	116.81	101.58	102.99	128.08	247.64	466.39	449.88	249.09	125.75	107.83	106.00	150.91	292.24	414.28
50.00°	297.55	245.40	142.34	93.69	89.93	90.33	101.87	168.65	331.89	336.49	188.62	105.13	94.84	95.71	116.20	218.98	297.55
52.50°	202.04	176.26	109.49	83.09	80.82	81.10	83.64	126.13	239.66	225.65	132.94	86.59	84.41	85.82	92.61	147.81	202.04
55.00°	140.34	112.32	78.43	72.82	72.98	72.56	70.94	86.55	157.34	164.87	103.42	76.85	77.24	76.99	79.33	111.75	140.34
57.50°	96.06	86.27	66.74	64.11	64.89	64.15	61.24	71.19	115.90	107.63	77.52	67.25	69.51	68.76	69.02	78.17	96.06
60.00°	74.16	62.90	55.23	55.28	56.72	55.76	53.18	56.90	80.99	84.21	65.64	58.97	61.22	61.76	60.95	65.21	74.16
62.50°	58.27	52.43	46.56	46.06	48.36	47.44	44.12	48.37	66.00	62.61	54.20	50.75	52.64	54.06	52.02	52.90	58.27
65.00°	48.45	42.49	38.07	37.28	39.95	39.12	34.63	39.78	52.71	51.67	44.06	43.20	43.81	45.23	42.59	44.07	48.45
67.50°	38.74	34.33	30.85	29.60	30.68	28.70	27.25	30.95	41.56	40.93	34.75	35.36	34.78	36.07	34.36	35.62	38.74
70.00°	29.12	25.99	23.52	21.69	21.23	18.46	20.57	22.26	30.54	30.98	27.31	25.79	25.61	26.49	26.72	28.54	29.12
72.50°	20.90	17.17	15.64	13.30	14.18	12.83	14.09	13.97	21.64	21.66	19.99	17.03	17.27	18.09	19.27	21.51	20.90
75.00°	13.57	10.22	9.03	7.56	7.45	7.56	7.66	7.65	13.21	14.23	12.87	11.48	9.38	10.91	11.90	14.62	13.57
77.50°	8.90	7.05	6.95	6.10	5.48	5.59	5.57	5.54	9.30	8.39	7.82	6.95	6.30	6.61	7.80	9.02	8.90
80.00°	5.56	4.73	5.01	4.84	3.86	3.84	4.20	3.93	5.77	6.13	5.68	5.42	5.22	4.75	4.61	6.17	5.56
82.50°	4.02	3.79	3.43	3.84	3.23	3.27	3.04	3.18	4.49	4.26	4.14	4.03	4.11	3.54	3.36	4.14	4.02
85.00°	3.19	2.95	2.33	3.02	2.61	2.67	1.90	2.45	3.29	3.10	3.26	2.99	3.00	2.77	2.49	3.50	3.19
87.50°	2.58	2.25	2.19	2.38	1.93	1.93	1.62	1.76	2.39	2.28	2.44	2.28	2.26	2.19	1.99	2.78	2.58
90.00°	2.04	1.99	2.02	2.15	1.32	1.43	1.39	1.41	1.69	1.96	1.68	2.16	1.61	1.71	1.54	1.98	2.04

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	2857	2857	2857	2857	2791	2791	2791	2791	2667	2667	2667	2553	2553	2553	2449	2449	2400
	1	2713	2641	2577	2519	2653	2589	2531	2479	2491	2445	2403	2402	2365	2331	2319	2290	2263
	2	2565	2439	2335	2248	2511	2398	2303	2222	2319	2241	2173	2247	2183	2126	2180	2128	2082
	3	2425	2259	2131	2029	2375	2225	2107	2012	2161	2062	1980	2102	2018	1948	2047	1977	1939
	4	2292	2098	1957	1848	2248	2071	1939	1837	2018	1904	1815	1969	1872	1793	1923	1841	1772
	5	2169	1956	1807	1696	2128	1932	1793	1689	1888	1767	1673	1848	1741	1658	1809	1717	1643
	6	2055	1828	1676	1567	2018	1809	1665	1561	1772	1645	1550	1737	1625	1540	1705	1606	1529
	7	1949	1714	1562	1455	1916	1698	1553	1451	1666	1537	1443	1637	1521	1435	1609	1506	1427
	8	1851	1612	1461	1357	1821	1598	1454	1354	1571	1441	1348	1546	1428	1343	1522	1416	1337
	9	1761	1520	1371	1271	1734	1507	1366	1269	1484	1355	1265	1463	1345	1260	1442	1335	1256
	10	1678	1436	1292	1195	1654	1426	1287	1193	1406	1278	1190	1387	1269	1186	1369	1261	1183

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	104.3 fc	6.9 ft
6.5 ft	74.6 fc	8.2 ft
7.5 ft	56.1 fc	9.4 ft
8.0 ft	49.3 fc	10.1 ft
10.0 ft	31.5 fc	12.6 ft
12.0 ft	21.9 fc	15.1 ft
14.0 ft	16.1 fc	17.6 ft
16.0 ft	12.3 fc	20.1 ft
20.0 ft	7.9 fc	25.2 ft
24.0 ft	5.5 fc	30.2 ft
28.0 ft	4.0 fc	35.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	691546	691546	691546
45.00°	175848	87968	36863
55.00°	53652	29986	27899
65.00°	25140	19751	20726
75.00°	11493	7648	6313
85.00°	8031	5862	6577

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	18.9	20.0	19.2	20.3	20.6	17.2	18.3	17.6	18.6	18.9
	3H	19.6	20.6	20.0	20.9	21.3	18.1	19.1	18.5	19.4	19.8
	4H	19.7	20.6	20.1	21.0	21.4	18.2	19.1	18.6	19.4	19.8
	6H	19.7	20.5	20.1	20.9	21.3	18.1	19.0	18.5	19.3	19.7
	8H	19.7	20.5	20.1	20.9	21.3	18.1	18.9	18.5	19.3	19.7
	12H	19.7	20.4	20.1	20.8	21.2	18.1	18.8	18.5	19.2	19.7
4H	2H	19.0	19.9	19.4	20.2	20.6	17.5	18.4	17.9	18.8	19.1
	3H	19.9	20.6	20.3	21.0	21.4	18.5	19.2	18.9	19.6	20.0
	4H	20.0	20.6	20.4	21.1	21.5	18.6	19.2	19.0	19.6	20.1
	6H	20.0	20.6	20.5	21.0	21.5	18.6	19.1	19.0	19.6	20.1
	8H	20.0	20.5	20.5	21.0	21.4	18.6	19.1	19.0	19.5	20.0
	12H	20.0	20.4	20.5	20.9	21.4	18.6	19.0	19.0	19.5	20.0
8H	4H	19.9	20.4	20.4	20.9	21.4	18.5	19.1	19.0	19.5	20.0
	6H	20.0	20.4	20.5	20.9	21.4	18.6	19.0	19.1	19.5	20.0
	8H	19.9	20.3	20.5	20.8	21.3	18.6	19.0	19.1	19.5	20.0
	12H	20.0	20.3	20.5	20.8	21.4	18.6	18.9	19.1	19.4	20.0
12H	4H	19.9	20.3	20.4	20.8	21.3	18.5	18.9	19.0	19.4	19.9
	6H	19.9	20.3	20.4	20.7	21.3	18.5	18.9	19.1	19.4	19.9
	8H	19.9	20.2	20.4	20.7	21.3	18.6	18.9	19.1	19.4	20.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0