

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SR3Mx 25L 35K ND xx xx RDA3F 25L 35K ND MW GL (nadir)
Nom. 3" Round Deep Adjustable A-Spec, Narrow Beam

Test Number

SP-01397

Test Date

9/12/2022

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	1947
Efficacy	74.02 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°	0.59
Four luminaires	0.59

Full Beam Angle

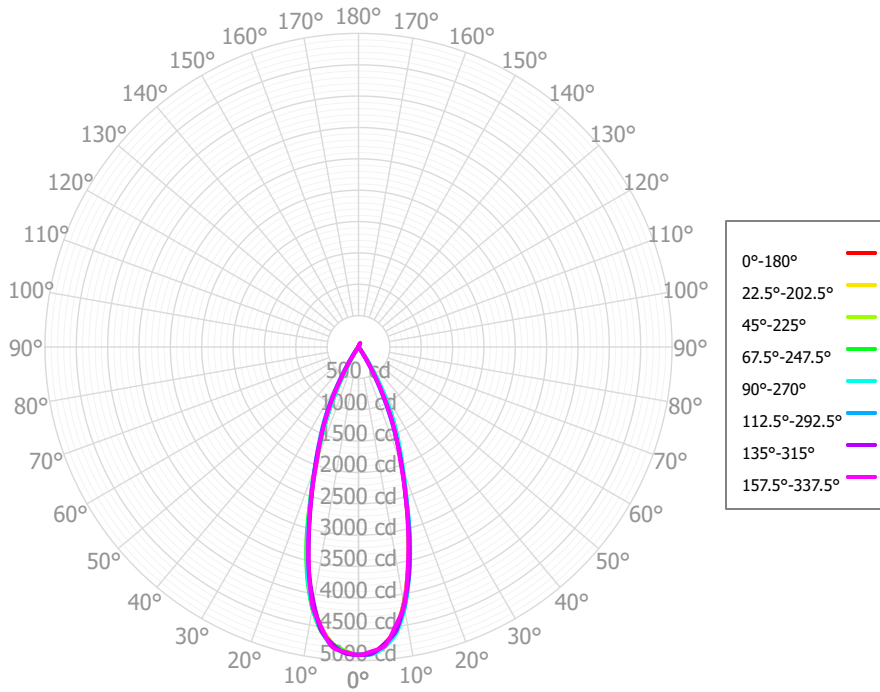
0° - 180°	35°
90° - 270°	36°

IES File Header Contents

Keyword	Value
TEST	SP-01397
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/12/2022
ISSUE DATE	12/19/2022
LUMCAT	SR3Mx 25L 35K ND xx xx RDA3F 25L 35K ND MW GL (nadir)
LUMINAIRE	Nom. 3" Round Deep Adjustable A-Spec, Narrow Beam
OTHER	Matte White Trim, Clear Glass Lens
OTHER	36 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 RDA3F 25L 35K ND
 MW GL (nadir)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	442.43	22.73%	90.00° - 100.00°	1.85	0.10%
10.00° - 20.00°	841.05	43.20%	100.00° - 110.00°	1.84	0.09%
20.00° - 30.00°	535.70	27.52%	100.00° - 120.00°	3.83	0.20%
30.00° - 40.00°	83.24	4.28%	120.00° - 130.00°	2.16	0.11%
40.00° - 50.00°	6.89	0.35%	130.00° - 140.00°	3.22	0.17%
50.00° - 60.00°	4.87	0.25%	140.00° - 150.00°	3.16	0.16%
60.00° - 70.00°	4.33	0.22%	150.00° - 160.00°	6.52	0.33%
70.00° - 80.00°	2.63	0.14%	160.00° - 170.00°	2.67	0.14%
80.00° - 90.00°	1.98	0.10%	170.00° - 180.00°	0.22	0.01%
0.00° - 90.00°	1923.11	98.79%	0.00° - 180.00°	1946.73	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°	4909.06	4909.06	4909.06	4909.06	4909.06	4909.06	4909.06	4909.06	4909.06	4909.06	4909.06	4909.06	4909.06	4909.06	4909.06	4909.06	4909.06
2.50°	4885.41	4866.57	4888.14	4880.77	4907.25	4882.34	4887.78	4867.24	4868.26	4860.08	4845.34	4864.37	4871.40	4886.52	4894.94	4857.01	4885.41
5.00°	4752.99	4780.43	4806.15	4797.02	4800.57	4795.32	4758.60	4803.78	4751.84	4753.60	4762.63	4749.51	4768.79	4770.79	4750.67	4787.78	4752.99
7.50°	4542.14	4517.18	4565.67	4577.72	4609.96	4556.51	4559.68	4513.67	4524.33	4541.86	4531.06	4573.57	4555.92	4566.47	4572.17	4492.80	4542.14
10.00°	4152.33	4164.36	4224.61	4199.32	4235.51	4182.25	4131.76	4212.21	4155.59	4218.52	4242.22	4233.26	4227.67	4217.91	4170.91	4193.77	4152.33
12.50°	3644.02	3643.10	3669.49	3705.69	3712.60	3677.58	3658.83	3645.07	3677.45	3711.33	3724.57	3774.82	3750.75	3732.64	3716.87	3626.28	3644.02
15.00°	3088.06	3041.89	3109.57	3084.18	3146.86	3062.89	3049.00	3077.68	3067.82	3154.51	3124.92	3204.93	3125.06	3169.47	3116.57	3059.17	3088.06
17.50°	2501.99	2508.40	2540.05	2533.21	2548.43	2519.60	2477.17	2506.08	2497.55	2520.61	2541.38	2559.42	2540.61	2536.50	2484.09	2504.77	2501.99
20.00°	2031.28	2005.03	2042.64	2056.28	2079.05	2033.23	2012.77	1948.23	1971.97	1966.93	1963.22	2006.45	1995.16	2006.35	2018.15	1957.99	2031.28
22.50°	1629.26	1618.29	1682.24	1658.68	1702.67	1628.78	1578.12	1576.03	1514.90	1530.78	1493.88	1512.69	1505.70	1563.35	1585.47	1581.82	1629.26
25.00°	1246.24	1280.11	1326.03	1339.83	1347.12	1286.05	1222.90	1202.79	1132.20	1108.92	1058.67	1063.90	1066.32	1133.84	1176.59	1204.74	1246.24
27.50°	873.87	916.39	977.30	998.60	1005.90	928.22	866.17	817.51	760.53	706.83	672.71	642.23	672.41	715.14	771.98	812.48	873.87
30.00°	540.11	542.75	642.25	636.37	664.42	559.66	505.69	448.71	400.18	385.97	301.03	348.94	316.96	395.31	448.79	433.41	540.11
32.50°	226.73	296.85	330.22	354.91	322.76	299.76	219.56	238.44	171.91	172.45	143.81	129.48	118.98	150.32	138.68	227.81	226.73
35.00°	86.95	97.28	115.60	145.11	139.70	113.67	106.50	48.78	71.91	44.60	43.86	39.26	46.89	37.52	61.24	38.41	86.95
37.50°	33.20	33.81	55.46	39.66	53.73	32.69	25.92	29.29	21.02	23.71	18.65	18.96	13.72	19.21	16.89	24.18	33.20
40.00°	13.67	16.22	17.66	21.74	18.26	19.05	16.16	11.94	15.22	11.72	11.76	10.85	9.93	10.60	10.42	11.22	13.67
42.50°	10.06	10.53	13.25	12.49	11.93	12.38	9.29	10.04	11.11	10.23	9.05	8.93	7.68	8.55	8.65	9.98	10.06
45.00°	8.34	8.56	9.96	10.19	8.98	9.93	8.34	8.29	8.47	8.45	7.28	7.46	6.52	7.26	8.12	8.70	8.34
47.50°	7.45	7.38	8.25	8.46	7.86	8.09	7.38	7.52	6.90	6.35	6.04	6.21	5.69	6.46	7.72	7.09	7.45
50.00°	6.81	6.43	6.84	7.16	7.28	6.60	6.43	6.79	6.19	5.16	4.91	5.27	5.08	5.78	7.37	5.65	6.81
52.50°	6.28	5.74	5.86	6.40	6.96	6.07	5.65	6.22	5.58	4.91	4.99	4.47	4.76	5.17	7.03	5.44	6.28
55.00°	5.80	5.12	5.14	6.01	6.13	6.06	5.19	5.71	5.05	4.65	5.30	4.67	4.61	4.83	6.13	5.27	5.80
57.50°	5.36	5.03	4.75	5.70	5.04	5.82	5.02	5.53	4.83	4.39	4.88	5.29	4.62	4.65	5.20	5.41	5.36
60.00°	5.01	5.07	4.77	5.44	4.80	5.46	5.35	5.40	4.85	4.37	4.35	4.91	4.74	4.45	4.70	5.48	5.01
62.50°	4.68	4.60	5.27	5.12	4.93	5.01	5.43	5.50	4.69	4.58	4.27	4.13	4.62	4.24	4.22	5.12	4.68
65.00°	4.35	4.02	5.30	4.77	4.70	4.52	5.10	5.45	4.40	4.34	4.26	3.74	4.37	4.01	3.93	4.76	4.35
67.50°	4.00	3.79	4.81	4.18	4.32	4.14	4.49	4.75	3.85	3.68	3.66	3.48	3.71	3.78	3.66	4.40	4.00
70.00°	3.54	3.62	4.13	3.45	3.73	3.81	3.47	3.98	3.13	3.06	2.99	2.95	2.82	3.23	3.12	3.96	3.54
72.50°	3.04	3.03	3.23	2.77	3.07	3.16	2.75	2.96	2.63	2.45	2.61	2.31	2.51	2.52	2.57	3.15	3.04
75.00°	2.64	2.35	2.65	2.12	2.71	2.37	2.47	2.10	2.25	2.14	2.27	1.92	2.47	2.35	2.29	2.44	2.64
77.50°	2.25	2.37	2.38	1.90	2.47	2.28	2.21	1.80	1.91	2.08	1.87	1.62	2.27	2.42	2.01	2.09	2.25
80.00°	2.10	2.51	2.22	1.92	2.23	2.46	1.99	1.53	1.59	1.93	1.46	1.68	1.98	2.21	1.85	1.80	2.10
82.50°	2.00	2.23	2.18	1.95	2.00	2.39	1.88	1.35	1.56	1.72	1.49	1.85	1.90	1.87	1.70	1.74	2.00
85.00°	1.81	1.88	1.99	1.97	1.92	2.22	1.91	1.22	1.69	1.57	1.55	1.84	1.90	1.74	1.97	1.73	1.81
87.50°	1.60	1.80	1.68	1.86	1.89	2.09	1.80	1.25	1.70	1.46	1.65	1.77	1.85	1.70	2.23	1.90	1.60
90.00°	1.51	1.75	1.56	1.68	1.63	1.96	1.54	1.31	1.65	1.41	1.75	1.70	1.78	1.73	1.82	2.05	1.51
92.50°	1.46	1.71	1.63	1.81	1.32	1.80	1.46	1.45	1.50	1.42	1.80	1.63	1.88	1.79	1.45	2.14	1.46
95.00°	1.52	1.66	1.73	2.07	1.54	1.64	1.60	1.59	1.30	1.54	1.84	1.67	2.05	1.69	1.69	2.16	1.52
97.50°	1.60	1.60	1.85	1.98	1.91	1.75	1.65	1.73	1.38	1.73	1.64	1.73	1.93	1.54	1.92	1.95	1.60
100.00°	1.85	1.53	1.74	1.73	1.90	1.94	1.61	1.77	1.59	1.74	1.44	1.66	1.71	1.70	1.87	1.77	1.85

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	2312	2312	2312	2312	2255	2255	2255	2255	2150	2150	2150	2053	2053	2053	1965	1965	1923
	1	2223	2178	2137	2100	2174	2134	2098	2065	2052	2023	1997	1976	1954	1934	1907	1890	1851
	2	2139	2061	1997	1943	2096	2027	1969	1919	1962	1915	1874	1901	1864	1831	1846	1816	1780
	3	2060	1959	1880	1818	2022	1931	1860	1802	1879	1820	1771	1830	1782	1741	1785	1746	1712
	4	1984	1867	1781	1715	1951	1844	1765	1704	1802	1735	1682	1762	1706	1661	1726	1679	1647
	5	1913	1784	1694	1628	1883	1766	1682	1620	1731	1659	1604	1698	1636	1588	1668	1615	1586
	6	1845	1709	1617	1551	1819	1693	1607	1545	1664	1589	1533	1637	1572	1522	1612	1555	1528
	7	1782	1639	1547	1483	1758	1627	1540	1478	1602	1525	1469	1579	1511	1461	1558	1498	1473
	8	1721	1576	1484	1421	1700	1565	1478	1418	1544	1466	1411	1524	1455	1404	1506	1444	1421
	9	1664	1516	1426	1365	1645	1507	1421	1362	1489	1411	1357	1472	1402	1352	1456	1393	1372
	10	1610	1462	1373	1313	1593	1453	1369	1311	1438	1361	1307	1423	1353	1303	1409	1345	1326

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	162.3 fc	3.5 ft
6.5 ft	116.2 fc	4.2 ft
7.5 ft	87.3 fc	4.8 ft
8.0 ft	76.7 fc	5.1 ft
10.0 ft	49.1 fc	6.4 ft
12.0 ft	34.1 fc	7.7 ft
14.0 ft	25.0 fc	9.0 ft
16.0 ft	19.2 fc	10.2 ft
20.0 ft	12.3 fc	12.8 ft
24.0 ft	8.5 fc	15.3 ft
28.0 ft	6.3 fc	17.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1076462	1076462	1076462
45.00°	2588	3090	2784
55.00°	2219	1965	2342
65.00°	2255	2750	2437
75.00°	2233	2244	2300
85.00°	4557	5013	4830

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	0.6	1.5	1.0	1.8	2.2	0.8	1.7	1.2	2.0	2.4
	3H	2.9	3.7	3.3	4.0	4.4	2.8	3.6	3.2	3.9	4.3
	4H	3.7	4.4	4.1	4.8	5.2	3.5	4.2	3.9	4.6	5.0
	6H	4.4	5.1	4.9	5.5	5.9	4.3	5.0	4.8	5.4	5.8
	8H	4.9	5.6	5.4	6.0	6.4	4.8	5.4	5.3	5.9	6.3
	12H	5.5	6.1	6.0	6.5	7.0	5.5	6.1	6.0	6.5	6.9
4H	2H	1.4	2.1	1.8	2.5	2.9	1.5	2.3	2.0	2.6	3.1
	3H	3.8	4.4	4.2	4.8	5.2	3.6	4.2	4.0	4.6	5.1
	4H	4.6	5.1	5.1	5.6	6.1	4.4	4.9	4.8	5.3	5.8
	6H	5.6	6.0	6.1	6.5	7.0	5.4	5.8	5.9	6.3	6.8
	8H	6.2	6.6	6.7	7.1	7.6	6.0	6.4	6.5	6.9	7.4
	12H	6.9	7.3	7.4	7.8	8.3	6.8	7.2	7.3	7.7	8.2
8H	4H	4.9	5.3	5.4	5.8	6.3	4.6	5.0	5.1	5.5	6.0
	6H	6.1	6.5	6.7	7.0	7.5	5.9	6.2	6.4	6.7	7.2
	8H	6.9	7.2	7.5	7.8	8.3	6.8	7.0	7.3	7.6	8.1
	12H	7.9	8.1	8.4	8.7	9.3	7.9	8.1	8.4	8.7	9.3
12H	4H	4.9	5.3	5.4	5.8	6.3	4.6	5.0	5.1	5.5	6.0
	6H	6.3	6.6	6.8	7.1	7.6	6.0	6.3	6.5	6.8	7.3
	8H	7.2	7.4	7.7	8.0	8.6	7.0	7.2	7.5	7.8	8.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0