

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

SR3Mx RAD3F 25L 35K ND xx xx RAD3F 25L 35K ND MW SO (nadir)
Nom. 3" Round Deep Adjustable A-Spec, Narrow Beam

Test Number

SP-01398

Test Date

9/12/2022

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

Summary of Results

Power

Input Watts	26.4 W
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Lumen Output

Output Lumens	1980
Efficacy	75 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	0.59

Full Beam Angle

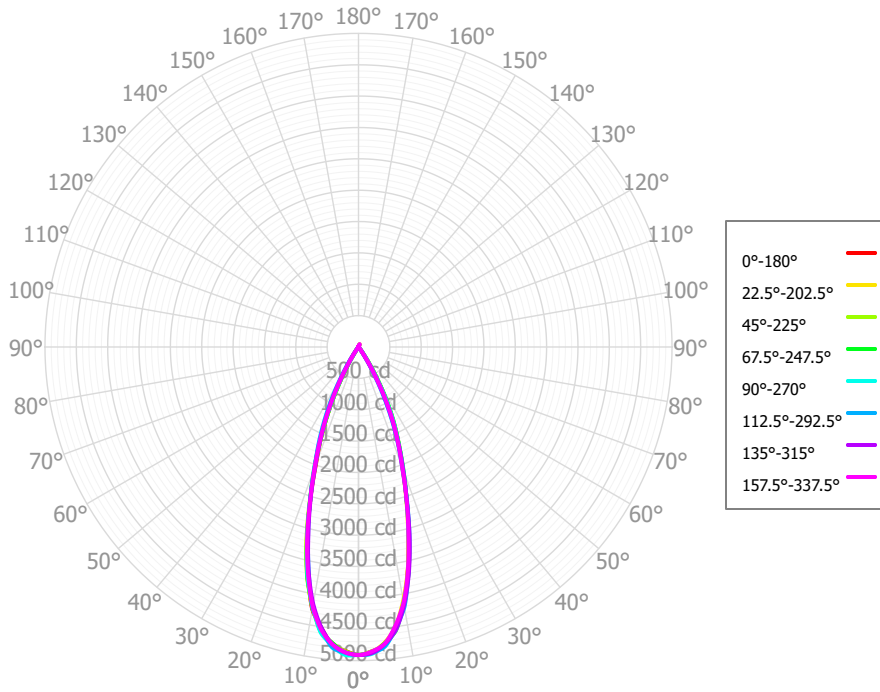
0° - 180°	36°
90° - 270°	36°

IES File Header Contents

Keyword	Value
TEST	SP-01398
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/12/2022
ISSUDATE	12/19/2022
LUMCAT	SR3Mx RAD3F 25L 35K ND xx xx RAD3F 25L 35K ND MW SO (nadir)
LUMINAIRE	Nom. 3" Round Deep Adjustable A-Spec, Narrow Beam
OTHER	Matte White Trim, Solite 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 RAD3F 25L 35K ND xx xx RAD3F 25L
 35K ND MW SO (nadir)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	441.45	22.30%	90.00° - 100.00°	1.87	0.09%
10.00° - 20.00°	847.37	42.80%	100.00° - 110.00°	1.82	0.09%
20.00° - 30.00°	550.04	27.78%	100.00° - 120.00°	3.80	0.19%
30.00° - 40.00°	95.19	4.81%	120.00° - 130.00°	2.16	0.11%
40.00° - 50.00°	8.93	0.45%	130.00° - 140.00°	2.51	0.13%
50.00° - 60.00°	5.79	0.29%	140.00° - 150.00°	3.01	0.15%
60.00° - 70.00°	5.00	0.25%	150.00° - 160.00°	5.30	0.27%
70.00° - 80.00°	2.97	0.15%	160.00° - 170.00°	2.15	0.11%
80.00° - 90.00°	2.11	0.11%	170.00° - 180.00°	0.23	0.01%
0.00° - 90.00°	1958.86	98.94%	0.00° - 180.00°	1979.87	100.00%

SR3Mx RAD3F 25L 35K ND xx xx RAD3F 25L
35K ND 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°	4911.82	4911.82	4911.82	4911.82	4911.82	4911.82	4911.82	4911.82	4911.82	4911.82	4911.82	4911.82	4911.82	4911.82	4911.82	4911.82	4911.82
2.50°	4860.46	4870.30	4857.04	4884.70	4898.05	4879.79	4872.84	4875.09	4852.73	4871.76	4856.07	4884.93	4914.51	4881.07	4886.39	4861.10	4860.46
5.00°	4773.21	4737.99	4775.18	4748.87	4763.87	4810.53	4761.21	4761.41	4776.95	4743.86	4755.15	4741.38	4773.72	4798.21	4758.81	4753.38	4773.21
7.50°	4499.70	4509.60	4501.65	4562.64	4550.37	4523.92	4521.66	4550.77	4519.14	4577.57	4543.96	4583.71	4598.50	4525.98	4553.98	4490.67	4499.70
10.00°	4174.99	4107.01	4165.29	4145.63	4144.17	4226.94	4161.81	4204.06	4248.67	4207.78	4231.00	4184.25	4198.47	4213.73	4182.72	4141.38	4174.99
12.50°	3638.33	3635.07	3644.80	3690.20	3676.86	3667.02	3675.81	3714.59	3702.77	3778.61	3749.54	3771.42	3754.11	3681.26	3705.74	3640.91	3638.33
15.00°	3099.56	3058.51	3077.21	3100.51	3088.15	3108.11	3090.11	3164.25	3149.95	3184.43	3208.16	3164.27	3167.01	3141.16	3149.21	3070.86	3099.56
17.50°	2553.99	2530.16	2560.24	2547.82	2547.18	2565.16	2540.16	2560.18	2561.38	2553.36	2583.95	2558.94	2560.16	2570.00	2550.75	2544.90	2553.99
20.00°	2055.06	2062.68	2053.14	2097.41	2084.78	2038.63	2013.87	2044.06	1983.23	2045.89	2030.22	2056.38	2070.70	2035.89	2074.58	2035.63	2055.06
22.50°	1675.47	1654.81	1681.07	1681.97	1670.01	1655.33	1577.03	1593.09	1555.85	1558.45	1558.27	1559.13	1591.21	1619.01	1651.35	1638.83	1675.47
25.00°	1302.53	1310.20	1327.42	1344.77	1320.72	1274.37	1189.43	1176.44	1131.73	1130.91	1115.46	1125.27	1166.29	1206.07	1256.77	1275.89	1302.53
27.50°	943.47	959.00	977.43	1001.57	966.28	907.13	816.00	781.03	735.35	709.75	701.07	706.96	744.31	803.08	872.20	899.22	943.47
30.00°	608.59	601.91	627.73	647.31	605.91	560.60	449.00	465.91	371.81	418.28	393.68	405.19	439.58	455.95	537.73	519.36	608.59
32.50°	315.33	337.52	367.22	358.00	332.50	302.84	238.30	192.01	196.80	134.07	174.08	141.74	147.26	225.44	217.02	289.82	315.33
35.00°	118.27	142.65	111.84	168.08	144.34	95.17	85.00	79.09	51.47	76.34	64.85	78.04	84.36	68.47	103.81	85.79	118.27
37.50°	59.27	51.86	66.10	51.36	47.59	52.95	37.02	33.85	31.39	23.00	31.53	25.62	26.65	38.28	33.82	42.39	59.27
40.00°	23.90	27.05	22.44	28.38	26.21	20.94	20.17	18.00	15.30	17.31	16.17	17.16	18.63	18.20	19.79	17.21	23.90
42.50°	16.96	16.14	16.20	15.13	15.02	15.78	14.17	12.08	12.23	11.90	11.12	10.36	11.35	12.64	14.06	13.47	16.96
45.00°	12.42	12.55	10.47	12.37	10.87	11.79	10.63	9.61	9.84	10.02	8.71	8.62	8.76	9.18	10.98	11.07	12.42
47.50°	10.34	10.36	9.59	9.90	8.67	10.31	9.11	8.06	9.21	8.27	7.55	7.07	6.54	8.23	8.16	8.85	10.34
50.00°	9.02	8.79	8.60	7.68	7.60	8.62	7.92	7.78	8.44	7.53	6.98	6.02	5.98	7.15	6.98	6.67	9.02
52.50°	8.34	7.92	6.92	6.57	7.03	6.54	6.97	7.74	7.36	6.90	6.63	5.32	5.57	5.94	5.88	6.28	8.34
55.00°	7.60	7.29	5.58	6.29	6.71	5.50	6.04	7.10	6.60	6.91	6.07	5.33	5.67	5.34	5.88	5.91	7.60
57.50°	6.80	7.15	5.73	6.27	6.23	6.00	6.49	6.37	6.42	6.89	5.43	5.60	5.48	5.24	5.88	5.84	6.80
60.00°	6.56	7.15	5.72	6.42	5.70	5.93	7.01	6.02	6.10	6.76	4.96	6.32	4.54	5.17	5.74	5.77	6.56
62.50°	6.65	6.72	5.17	5.94	5.39	5.16	6.31	5.72	5.60	6.36	4.53	6.22	3.99	5.12	5.56	5.76	6.65
65.00°	5.97	6.21	4.92	5.12	5.15	4.66	5.59	5.17	5.21	5.12	4.13	5.02	4.33	4.73	4.96	5.61	5.97
67.50°	4.92	5.36	5.51	4.48	4.74	4.46	4.68	4.62	4.96	3.97	3.75	3.92	4.24	4.12	4.34	4.71	4.92
70.00°	4.12	4.45	5.48	3.91	4.30	4.03	3.78	3.73	4.28	3.07	3.06	2.93	3.35	3.31	3.59	3.87	4.12
72.50°	3.43	3.79	4.10	3.31	3.70	3.41	3.00	2.88	3.16	2.41	2.34	2.36	2.69	2.39	2.90	3.20	3.43
75.00°	3.03	3.15	3.02	2.69	3.08	2.91	2.33	3.05	2.68	2.24	2.37	2.18	2.37	2.36	2.50	2.66	3.03
77.50°	2.74	2.59	2.49	2.42	2.52	2.49	2.53	3.15	2.74	2.17	2.44	1.92	2.11	2.67	2.19	2.51	2.74
80.00°	2.42	2.03	2.16	2.26	1.97	2.33	2.63	2.55	2.61	2.27	2.52	1.59	1.92	2.34	2.26	2.29	2.42
82.50°	2.09	1.75	2.14	2.21	2.12	2.32	2.14	1.99	2.34	2.19	2.58	1.47	1.80	1.80	2.25	1.90	2.09
85.00°	1.93	1.49	2.06	2.19	2.32	2.18	1.81	1.80	2.09	1.85	2.06	1.50	1.74	1.73	2.02	1.68	1.93
87.50°	1.81	1.63	1.92	1.78	2.10	1.98	2.08	1.65	1.86	1.68	1.57	1.57	1.67	1.78	1.84	1.82	1.81
90.00°	1.61	1.73	1.82	1.31	1.87	1.79	2.21	1.69	1.76	1.69	1.43	1.65	1.60	1.71	1.78	1.90	1.61
92.50°	1.41	1.50	1.77	1.38	1.65	1.61	1.87	1.79	1.72	1.73	1.34	1.66	1.55	1.63	1.78	1.86	1.41
95.00°	1.62	1.34	1.62	1.50	1.46	1.67	1.67	2.09	1.81	1.79	1.70	1.64	1.51	1.81	1.86	1.88	1.62
97.50°	1.86	1.62	1.39	1.52	1.53	1.82	1.79	2.20	1.94	1.90	1.97	1.61	1.59	2.04	1.89	1.97	1.86
100.00°	1.83	1.81	1.41	1.53	1.59	1.69	1.78	1.80	1.97	2.04	1.73	1.58	1.75	1.87	1.84	1.93	1.83

SR3Mx RAD3F 25L 35K ND xx xx RAD3F 25L
 35K ND 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%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	2352	2352	2352	2352	2295	2295	2295	2295	2188	2188	2188	2091	2091	2091	2001	2001	1959
	1	2261	2215	2173	2135	2211	2170	2133	2099	2087	2058	2031	2011	1988	1967	1940	1923	1884
	2	2175	2095	2029	1973	2131	2060	2000	1950	1994	1946	1905	1934	1895	1861	1877	1847	1810
	3	2093	1989	1909	1846	2055	1961	1888	1830	1909	1848	1798	1860	1810	1768	1814	1774	1740
	4	2016	1895	1807	1740	1982	1873	1791	1729	1830	1761	1707	1790	1732	1685	1753	1704	1665
	5	1942	1810	1718	1650	1912	1792	1706	1642	1756	1682	1626	1723	1660	1610	1693	1639	1609
	6	1873	1733	1638	1571	1846	1717	1629	1565	1688	1611	1553	1660	1593	1542	1635	1576	1549
	7	1807	1662	1567	1501	1783	1649	1559	1496	1624	1545	1488	1601	1531	1479	1579	1517	1492
	8	1745	1596	1502	1437	1724	1585	1496	1434	1564	1484	1427	1544	1473	1421	1526	1462	1439
	9	1687	1535	1443	1380	1667	1526	1438	1377	1508	1428	1372	1491	1419	1367	1475	1410	1388
	10	1631	1479	1388	1327	1614	1471	1384	1325	1455	1376	1321	1440	1368	1317	1426	1360	1341

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	162.4 fc	3.6 ft
6.5 ft	116.3 fc	4.2 ft
7.5 ft	87.3 fc	4.9 ft
8.0 ft	76.7 fc	5.2 ft
10.0 ft	49.1 fc	6.5 ft
12.0 ft	34.1 fc	7.8 ft
14.0 ft	25.1 fc	9.1 ft
16.0 ft	19.2 fc	10.4 ft
20.0 ft	12.3 fc	13.0 ft
24.0 ft	8.5 fc	15.6 ft
28.0 ft	6.3 fc	18.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1077066	1077066	1077066
45.00°	3852	3246	3371
55.00°	2905	2132	2565
65.00°	3100	2555	2672
75.00°	2571	2556	2612
85.00°	4861	5187	5833

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	2.1	3.0	2.5	3.3	3.7	1.3	2.2	1.7	2.5	2.8
	3H	4.2	5.0	4.6	5.3	5.7	3.3	4.1	3.7	4.5	4.9
	4H	4.9	5.6	5.3	6.0	6.4	4.1	4.8	4.5	5.2	5.6
	6H	5.6	6.3	6.1	6.7	7.1	4.7	5.4	5.2	5.8	6.2
	8H	6.0	6.6	6.5	7.0	7.5	5.1	5.8	5.6	6.2	6.6
	12H	6.5	7.1	6.9	7.5	7.9	5.8	6.4	6.2	6.8	7.2
4H	2H	2.6	3.3	3.0	3.7	4.1	2.0	2.7	2.4	3.1	3.5
	3H	4.9	5.5	5.4	6.0	6.4	4.1	4.7	4.5	5.1	5.5
	4H	5.8	6.3	6.2	6.7	7.2	4.9	5.4	5.4	5.9	6.4
	6H	6.6	7.1	7.1	7.6	8.1	5.7	6.2	6.2	6.7	7.2
	8H	7.1	7.5	7.6	8.0	8.5	6.3	6.7	6.8	7.1	7.6
	12H	7.7	8.0	8.2	8.5	9.0	7.0	7.4	7.6	7.9	8.4
8H	4H	6.0	6.4	6.5	6.9	7.4	5.2	5.6	5.7	6.1	6.6
	6H	7.1	7.4	7.6	7.9	8.4	6.3	6.6	6.8	7.1	7.7
	8H	7.7	7.9	8.2	8.5	9.0	7.0	7.3	7.6	7.8	8.4
	12H	8.4	8.7	9.0	9.2	9.8	8.0	8.3	8.6	8.8	9.4
12H	4H	6.0	6.4	6.5	6.9	7.4	5.3	5.6	5.8	6.1	6.6
	6H	7.2	7.5	7.7	8.0	8.5	6.5	6.8	7.1	7.3	7.9
	8H	7.9	8.1	8.4	8.7	9.3	7.3	7.6	7.9	8.1	8.7

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0