

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01393_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	2070
Efficacy	78.72 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.69
Two luminaires, plane 90°	0.71
Four luminaires	0.68

Full Beam Angle

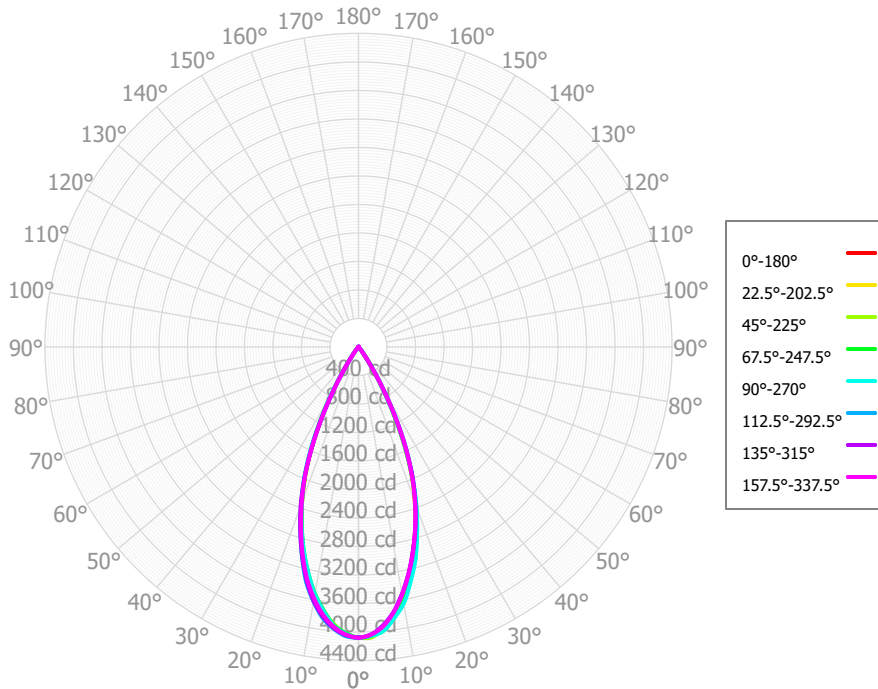
0° - 180°	44°
90° - 270°	44°

IES File Header Contents

Keyword	Value
TEST	SP-01393_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/7/2022
ISSUDATE	12/16/2022
LUMCAT	SR3Mx 25L 35K MD xx xx RA3F 25L 35K MD MW NL (nadir)
LUMINAIRE	Nom. 3" Round Downlight, Medium Beam
OTHER	Matte White Trim, No Lens
OTHER	44 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 RA3F 25L 35K MD
 MW NL (nadir)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	369.13	17.83%	90.00° - 100.00°	1.34	0.06%
10.00° - 20.00°	824.12	39.81%	100.00° - 110.00°	1.28	0.06%
20.00° - 30.00°	686.19	33.14%	100.00° - 120.00°	2.91	0.14%
30.00° - 40.00°	155.45	7.51%	120.00° - 130.00°	1.73	0.08%
40.00° - 50.00°	12.98	0.63%	130.00° - 140.00°	1.96	0.09%
50.00° - 60.00°	2.76	0.13%	140.00° - 150.00°	1.74	0.08%
60.00° - 70.00°	2.66	0.13%	150.00° - 160.00°	1.07	0.05%
70.00° - 80.00°	3.68	0.18%	160.00° - 170.00°	0.52	0.03%
80.00° - 90.00°	1.97	0.10%	170.00° - 180.00°	0.17	0.01%
0.00° - 90.00°	2058.93	99.45%	0.00° - 180.00°	2070.37	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°	4078.62	4078.62	4078.62	4078.62	4078.62	4078.62	4078.62	4078.62	4078.62	4078.62	4078.62	4078.62	4078.62	4078.62	4078.62	4078.62	4078.62
2.50°	4063.95	4045.85	4081.47	4048.93	4059.81	4062.46	4047.46	4039.19	4047.36	4025.19	4046.51	4016.89	4029.95	4040.68	4039.86	4038.12	4063.95
5.00°	3934.81	3972.99	3963.33	3997.12	4001.89	3971.10	3963.48	3943.99	3932.41	3943.91	3907.42	3923.47	3932.54	3928.40	3924.50	3940.78	3934.81
7.50°	3782.59	3779.09	3826.19	3823.61	3838.39	3840.23	3819.97	3792.80	3787.03	3754.02	3761.29	3730.46	3741.67	3758.99	3753.18	3761.33	3782.59
10.00°	3528.76	3564.09	3588.30	3638.15	3657.41	3629.20	3622.29	3584.54	3564.01	3557.04	3518.50	3517.58	3523.86	3524.60	3516.94	3530.45	3528.76
12.50°	3264.23	3285.80	3333.59	3356.21	3377.19	3386.77	3359.19	3333.49	3312.46	3283.18	3270.22	3252.49	3250.94	3261.44	3247.68	3257.74	3264.23
15.00°	2956.99	2990.57	3020.09	3069.20	3088.26	3059.43	3049.18	3023.55	3006.86	3005.02	2967.20	2968.15	2962.87	2972.42	2953.18	2964.76	2956.99
17.50°	2647.51	2657.40	2695.89	2715.71	2736.29	2708.46	2717.34	2679.80	2685.84	2663.90	2659.10	2646.39	2651.34	2667.79	2649.17	2650.13	2647.51
20.00°	2312.30	2312.88	2345.03	2357.21	2380.52	2350.25	2373.54	2324.14	2342.10	2318.86	2322.29	2313.81	2325.85	2352.35	2321.29	2327.79	2312.30
22.50°	1968.24	1949.25	1964.18	1952.06	1969.85	1990.72	1971.81	1963.36	1961.80	1947.01	1966.40	1965.23	1983.71	1985.76	1987.08	1958.85	1968.24
25.00°	1535.92	1547.57	1526.43	1539.92	1554.99	1541.78	1546.42	1534.66	1539.97	1561.92	1540.41	1572.93	1588.94	1592.13	1565.11	1578.35	1535.92
27.50°	1109.18	1096.78	1099.45	1091.26	1105.66	1083.45	1111.64	1084.57	1121.63	1119.05	1121.86	1129.74	1144.58	1173.13	1127.56	1148.92	1109.18
30.00°	712.81	706.23	688.04	678.37	684.93	704.90	674.09	708.48	706.39	711.23	722.67	739.69	754.41	744.16	744.90	711.52	712.81
32.50°	367.60	377.05	382.40	392.60	406.91	336.98	405.96	348.46	409.79	408.42	394.48	397.55	403.73	443.60	367.48	427.50	367.60
35.00°	205.17	181.76	194.76	168.50	176.78	209.22	171.89	202.01	195.45	176.25	206.23	195.17	204.67	179.92	214.04	156.13	205.17
37.50°	78.87	92.06	86.42	100.35	106.33	90.00	99.71	83.18	92.15	98.41	79.05	90.01	90.01	92.30	70.56	95.12	78.87
40.00°	46.68	44.92	47.98	48.84	50.48	55.71	46.24	50.12	47.49	42.70	43.34	40.72	40.78	38.07	44.01	38.92	46.68
42.50°	22.34	23.54	25.54	28.59	29.61	25.23	28.28	21.80	25.86	24.24	20.38	21.71	19.44	22.12	19.47	24.66	22.34
45.00°	13.14	12.73	13.96	14.16	14.20	15.49	12.02	13.78	13.27	12.08	12.13	12.89	11.03	10.22	13.22	11.62	13.14
47.50°	6.82	6.85	7.86	8.24	8.81	7.41	7.69	6.20	7.87	8.07	7.18	8.19	6.60	7.42	7.66	8.36	6.82
50.00°	4.72	4.58	4.60	4.40	5.12	5.26	3.65	4.37	4.54	5.41	5.24	5.68	4.99	4.99	5.61	5.39	4.72
52.50°	3.44	3.55	3.08	2.90	3.79	3.46	2.92	2.81	3.44	4.09	3.97	3.81	3.95	3.68	3.80	3.78	3.44
55.00°	3.11	2.81	2.26	2.10	2.88	2.53	2.29	3.02	2.77	3.12	3.16	3.32	3.11	2.49	2.74	2.52	3.11
57.50°	2.74	2.15	2.36	1.92	2.42	1.86	2.23	3.15	2.67	2.43	2.89	3.10	2.29	2.54	2.09	2.40	2.74
60.00°	2.35	2.03	2.71	2.02	2.20	1.69	2.20	2.93	2.64	2.45	2.90	2.99	2.23	2.59	2.43	2.29	2.35
62.50°	2.18	1.99	2.72	2.30	2.16	1.78	2.30	2.78	2.96	2.90	2.70	2.89	2.22	2.69	2.78	2.22	2.18
65.00°	2.17	2.43	2.67	2.33	2.36	2.25	2.51	2.83	3.28	2.94	2.40	2.92	2.55	2.73	3.16	2.36	2.17
67.50°	2.53	2.91	2.85	2.24	2.71	2.55	2.99	2.88	3.49	2.80	2.77	2.96	2.86	2.54	3.48	2.87	2.53
70.00°	3.09	3.34	3.06	2.83	3.01	2.66	3.34	2.93	3.73	3.13	3.32	3.33	2.83	2.50	3.75	3.24	3.09
72.50°	3.71	3.75	3.10	3.69	3.28	2.68	3.44	3.14	4.32	3.63	3.55	3.68	2.87	2.86	3.91	3.42	3.71
75.00°	4.35	3.80	3.12	3.66	3.36	2.61	3.57	3.58	4.80	4.00	3.72	3.77	3.31	3.08	3.96	3.75	4.35
77.50°	3.75	3.74	2.88	3.38	3.37	2.65	3.76	3.74	4.72	4.35	4.15	3.78	3.54	3.04	3.70	4.24	3.75
80.00°	2.79	2.76	2.58	2.61	2.49	2.76	3.32	3.55	4.32	3.42	4.61	3.45	2.89	2.78	3.19	3.64	2.79
82.50°	2.06	1.87	1.78	1.76	1.37	2.24	2.11	2.85	2.70	2.31	3.10	2.98	2.24	2.18	2.45	2.14	2.06
85.00°	1.37	1.35	1.09	1.43	1.26	1.38	1.53	1.67	1.46	1.73	1.54	2.04	1.62	1.72	1.57	1.47	1.37
87.50°	1.21	0.98	1.05	1.16	1.33	1.10	1.55	1.18	1.17	1.18	1.47	1.38	1.22	1.41	1.32	1.33	1.21
90.00°	1.10	1.04	1.06	1.10	1.29	1.04	1.48	1.23	1.07	1.23	1.40	1.51	1.31	1.21	1.38	1.22	1.10
92.50°	1.05	1.10	1.32	1.05	1.25	1.12	1.33	1.22	1.33	1.28	1.40	1.54	1.38	1.11	1.27	1.13	1.05
95.00°	1.00	1.18	1.46	0.94	1.30	1.23	1.27	1.17	1.42	1.34	1.39	1.40	1.42	1.17	1.09	1.07	1.00
97.50°	0.94	1.26	1.34	0.87	1.34	1.44	1.26	1.11	1.27	1.37	1.30	1.27	1.33	1.36	0.95	1.03	0.94
100.00°	0.89	1.34	1.22	1.10	1.18	1.66	1.25	1.05	1.14	1.18	1.26	1.17	1.10	1.30	0.81	1.21	0.89

SR3Mx 25L 35K MD xx xx RA3F 25L 35K MD
 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	2462	2462	2462	2462	2403	2403	2403	2403	2294	2294	2294	2194	2194	2194	2102	2102	2102	2059
	1	2363	2313	2267	2226	2312	2267	2227	2190	2182	2150	2121	2104	2079	2056	2032	2013	1995	1972
	2	2268	2181	2109	2049	2223	2145	2080	2025	2077	2025	1979	2015	1973	1936	1958	1924	1894	1886
	3	2177	2063	1976	1906	2137	2035	1955	1890	1981	1914	1859	1930	1875	1829	1884	1839	1800	1804
	4	2090	1958	1861	1788	2055	1935	1845	1776	1891	1815	1755	1850	1786	1734	1812	1758	1713	1725
	5	2008	1862	1761	1686	1976	1843	1748	1678	1807	1725	1662	1773	1702	1647	1741	1681	1632	1651
	6	1929	1775	1671	1596	1901	1759	1661	1590	1728	1643	1579	1700	1625	1568	1674	1608	1557	1581
	7	1855	1694	1590	1516	1830	1681	1582	1512	1655	1568	1504	1631	1554	1496	1609	1540	1487	1515
	8	1785	1620	1516	1444	1762	1608	1510	1441	1587	1498	1435	1566	1487	1429	1547	1476	1422	1453
	9	1719	1551	1448	1379	1698	1541	1443	1376	1523	1434	1371	1505	1424	1367	1489	1416	1362	1394
	10	1656	1487	1386	1319	1637	1479	1382	1317	1463	1374	1313	1447	1366	1309	1433	1359	1305	1339

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	134.8 fc	4.4 ft
6.5 ft	96.5 fc	5.2 ft
7.5 ft	72.5 fc	6.1 ft
8.0 ft	63.7 fc	6.5 ft
10.0 ft	40.8 fc	8.1 ft
12.0 ft	28.3 fc	9.7 ft
14.0 ft	20.8 fc	11.3 ft
16.0 ft	15.9 fc	12.9 ft
20.0 ft	10.2 fc	16.1 ft
24.0 ft	7.1 fc	19.4 ft
28.0 ft	5.2 fc	22.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	894362	894362	894362
45.00°	4076	4330	4405
55.00°	1187	863	1100
65.00°	1127	1383	1226
75.00°	3684	2644	2846
85.00°	3456	2750	3183

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	-5.2	-4.3	-4.8	-4.0	-3.6	-4.8	-3.9	-4.4	-3.5	-3.2
	3H	-0.6	0.2	-0.2	0.5	0.9	-0.6	0.2	-0.2	0.5	0.9
	4H	2.7	3.4	3.1	3.8	4.2	1.8	2.6	2.2	2.9	3.3
	6H	4.8	5.5	5.3	5.9	6.3	4.1	4.8	4.5	5.1	5.6
	8H	5.4	6.0	5.8	6.4	6.8	4.7	5.3	5.2	5.7	6.2
	12H	5.7	6.3	6.2	6.7	7.1	5.2	5.8	5.6	6.2	6.6
4H	2H	-3.6	-2.9	-3.2	-2.5	-2.1	-3.8	-3.0	-3.3	-2.7	-2.3
	3H	1.1	1.7	1.6	2.1	2.6	0.9	1.5	1.3	1.9	2.3
	4H	4.2	4.7	4.6	5.2	5.6	3.4	3.9	3.8	4.3	4.8
	6H	6.4	6.9	6.9	7.3	7.8	5.7	6.1	6.2	6.6	7.1
	8H	7.0	7.4	7.5	7.9	8.4	6.4	6.8	6.9	7.3	7.8
	12H	7.4	7.7	7.9	8.2	8.7	6.9	7.3	7.4	7.8	8.3
8H	4H	5.0	5.4	5.5	5.8	6.3	4.5	4.9	5.0	5.4	5.9
	6H	7.3	7.6	7.8	8.1	8.6	7.0	7.3	7.5	7.8	8.3
	8H	7.9	8.2	8.5	8.8	9.3	7.8	8.1	8.4	8.6	9.2
	12H	8.4	8.7	9.0	9.2	9.8	8.5	8.7	9.0	9.2	9.8
12H	4H	5.1	5.4	5.6	5.9	6.4	4.8	5.2	5.3	5.7	6.2
	6H	7.5	7.7	8.0	8.2	8.8	7.3	7.6	7.9	8.1	8.6
	8H	8.2	8.4	8.7	8.9	9.5	8.2	8.5	8.8	9.0	9.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0