

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SR3Mx 25L 35K ND xx xx RA3F 25L 35K ND MW SO (nadir)
Nom. 3" Round Downlight, Narrow Beam

Test Number

SP-01392_4

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	1998
Efficacy	75.97 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	0.58

Full Beam Angle

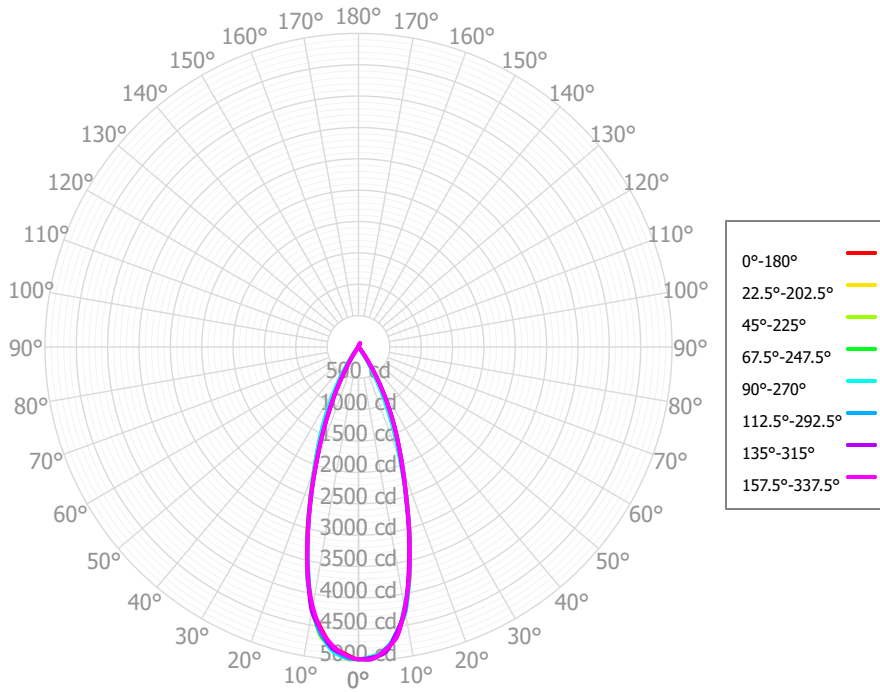
0° - 180°	36°
90° - 270°	36°

IES File Header Contents

Keyword	Value
TEST	SP-01392_4
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/7/2022
ISSUE DATE	12/16/2022
LUMCAT	SR3Mx 25L 35K ND xx xx RA3F 25L 35K ND MW SO (nadir)
LUMINAIRE	Nom. 3" Round Downlight, 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 25L 35K ND xx xx RA3F 25L 35K ND
 MW SO (nadir)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	448.40	22.44%	90.00° - 100.00°	1.42	0.07%
10.00° - 20.00°	849.48	42.52%	100.00° - 110.00°	1.36	0.07%
20.00° - 30.00°	540.82	27.07%	100.00° - 120.00°	2.80	0.14%
30.00° - 40.00°	116.87	5.85%	120.00° - 130.00°	1.61	0.08%
40.00° - 50.00°	9.14	0.46%	130.00° - 140.00°	1.97	0.10%
50.00° - 60.00°	4.18	0.21%	140.00° - 150.00°	2.58	0.13%
60.00° - 70.00°	3.91	0.20%	150.00° - 160.00°	5.75	0.29%
70.00° - 80.00°	4.09	0.20%	160.00° - 170.00°	2.87	0.14%
80.00° - 90.00°	1.93	0.10%	170.00° - 180.00°	0.19	0.01%
0.00° - 90.00°	1978.81	99.04%	0.00° - 180.00°	1998.00	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°	4979.12	4979.12	4979.12	4979.12	4979.12	4979.12	4979.12	4979.12	4979.12	4979.12	4979.12	4979.12	4979.12	4979.12	4979.12	4979.12	4979.12
2.50°	4960.16	4954.31	4977.88	4940.40	4942.85	4945.42	4913.19	4914.50	4897.93	4930.19	4959.11	4950.22	4953.81	4983.74	4957.62	4981.51	4960.16
5.00°	4874.92	4861.94	4842.91	4861.21	4865.96	4812.88	4825.13	4774.83	4789.58	4794.51	4808.85	4846.02	4862.07	4837.50	4891.66	4852.67	4874.92
7.50°	4636.87	4626.40	4667.78	4607.56	4600.37	4622.10	4560.80	4564.15	4537.18	4587.71	4648.27	4616.02	4596.35	4661.87	4607.59	4673.46	4636.87
10.00°	4284.17	4247.00	4240.10	4278.87	4301.23	4228.59	4282.62	4203.23	4233.68	4223.74	4213.77	4262.53	4256.23	4215.11	4272.68	4242.08	4284.17
12.50°	3727.25	3738.25	3776.89	3745.88	3737.89	3770.00	3721.19	3748.17	3720.06	3753.34	3768.01	3720.52	3691.30	3728.48	3690.34	3737.07	3727.25
15.00°	3154.60	3115.43	3136.57	3138.01	3139.07	3122.04	3147.89	3121.00	3143.93	3185.31	3145.22	3156.12	3123.62	3126.16	3111.14	3143.92	3154.60
17.50°	2557.58	2549.54	2525.65	2559.17	2549.89	2508.88	2547.18	2525.48	2556.75	2559.65	2524.88	2561.84	2548.81	2511.61	2544.28	2529.62	2557.58
20.00°	2044.46	2027.68	2032.57	1989.27	1961.61	1981.64	1950.13	1980.28	1966.85	2034.41	2044.61	2052.07	2034.21	2072.86	2022.54	2070.61	2044.46
22.50°	1646.25	1598.47	1566.08	1543.82	1521.39	1493.10	1504.39	1491.16	1506.50	1560.59	1570.87	1641.15	1652.94	1645.96	1649.37	1641.37	1646.25
25.00°	1276.04	1231.94	1187.48	1130.08	1089.50	1086.45	1064.68	1079.89	1071.60	1154.21	1202.64	1262.25	1287.73	1302.64	1287.86	1293.50	1276.04
27.50°	939.45	893.20	829.72	783.87	749.17	720.75	723.86	721.27	735.15	777.58	841.71	916.22	953.19	962.20	958.62	957.89	939.45
30.00°	638.45	571.04	529.87	451.82	412.78	429.96	398.75	426.68	413.62	496.09	554.01	612.86	646.63	664.33	651.60	664.61	638.45
32.50°	374.92	339.47	279.32	263.68	243.84	210.76	232.36	218.79	242.76	250.43	286.29	347.95	386.48	370.95	396.93	375.95	374.92
35.00°	194.39	154.79	145.29	99.10	80.89	105.42	81.82	103.42	88.46	131.94	160.59	176.33	191.44	213.11	194.78	220.58	194.39
37.50°	90.57	70.14	48.30	52.58	46.93	37.20	47.57	38.65	50.01	53.81	51.16	78.42	91.63	63.75	98.97	74.61	90.57
40.00°	34.31	30.11	27.47	20.37	15.23	20.52	17.93	21.27	20.16	27.03	31.68	30.16	29.66	37.16	33.32	43.46	34.31
42.50°	17.03	15.22	12.76	12.83	11.67	10.41	13.88	11.88	13.92	13.76	15.17	16.25	16.14	12.93	20.55	16.26	17.03
45.00°	9.10	9.90	8.91	7.31	8.36	8.29	10.10	9.06	8.58	9.56	11.68	9.89	8.76	10.66	11.45	12.29	9.10
47.50°	7.90	7.52	5.98	6.42	7.11	6.69	7.55	7.25	7.78	7.30	8.49	8.08	8.27	8.45	8.02	8.45	7.90
50.00°	6.63	6.09	4.45	5.75	5.88	5.65	5.46	6.16	6.99	5.94	6.39	6.19	7.25	6.69	6.07	7.65	6.63
52.50°	5.34	5.25	3.85	4.81	4.78	4.81	5.06	5.31	5.74	4.74	4.66	4.27	5.71	5.11	6.12	6.82	5.34
55.00°	4.47	4.56	4.51	3.89	3.78	4.16	4.62	4.61	4.56	4.35	4.04	3.86	4.80	4.43	5.48	5.54	4.47
57.50°	3.83	4.20	4.31	3.43	3.31	4.10	4.09	4.71	4.43	4.07	3.63	4.13	4.44	3.95	4.02	4.37	3.83
60.00°	3.77	3.92	3.09	3.01	3.02	4.52	3.74	5.26	4.33	3.84	3.71	3.82	4.15	4.26	3.53	4.08	3.77
62.50°	3.98	3.90	2.64	3.16	3.45	4.19	3.84	4.87	4.48	3.61	3.58	3.28	3.89	4.44	4.05	3.93	3.98
65.00°	4.08	3.93	3.00	3.31	3.78	3.32	4.23	4.02	4.58	4.16	3.01	3.11	4.01	4.18	4.27	4.68	4.08
67.50°	4.12	3.82	3.48	3.48	3.75	3.16	5.27	4.27	4.32	4.75	2.86	3.06	4.36	4.05	4.22	5.24	4.12
70.00°	4.54	3.70	4.07	3.65	3.72	3.45	5.71	4.97	4.14	4.52	3.49	3.02	4.40	4.30	4.52	4.83	4.54
72.50°	5.09	3.82	4.11	3.80	3.67	3.55	5.01	4.31	4.42	4.27	3.88	2.98	4.24	4.43	5.12	4.58	5.09
75.00°	4.78	3.96	3.72	3.79	3.37	3.55	4.30	3.18	4.50	4.30	3.86	3.44	4.31	4.28	5.28	4.97	4.78
77.50°	4.23	3.18	3.04	2.86	2.49	2.75	3.55	2.63	3.68	4.26	3.51	4.01	4.48	3.96	5.14	4.97	4.23
80.00°	3.21	2.35	2.17	2.03	1.82	1.56	2.78	2.26	2.86	2.97	2.69	3.31	3.77	3.26	4.17	3.66	3.21
82.50°	2.07	1.85	1.90	1.63	1.58	1.37	1.97	1.90	2.00	1.76	2.03	2.37	2.67	2.48	2.69	2.52	2.07
85.00°	1.70	1.36	2.02	1.33	1.36	1.59	1.44	1.56	1.35	1.40	1.60	1.89	1.97	1.57	1.86	1.91	1.70
87.50°	1.47	1.31	1.80	1.41	1.16	1.46	1.25	1.50	1.35	1.08	1.34	1.46	1.42	1.07	1.37	1.50	1.47
90.00°	1.44	1.27	1.40	1.42	1.05	1.20	1.20	1.50	1.38	1.12	1.26	1.41	1.32	1.20	1.32	1.55	1.44
92.50°	1.44	1.37	1.22	1.28	1.06	1.18	1.30	1.33	1.49	1.15	1.30	1.39	1.36	1.27	1.48	1.58	1.44
95.00°	1.51	1.46	1.14	1.12	1.06	1.23	1.30	1.14	1.48	1.15	1.45	1.49	1.32	1.26	1.40	1.55	1.51
97.50°	1.58	1.44	1.22	0.95	1.04	1.22	1.21	1.23	1.25	1.11	1.52	1.59	1.26	1.16	1.23	1.49	1.58
100.00°	1.31	1.43	1.37	0.91	1.12	1.20	1.14	1.35	1.20	0.93	1.51	1.49	1.28	0.96	1.35	1.39	1.31

SR3Mx 25L 35K ND xx xx RA3F 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%	10%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	2374	2374	2374	2374	2317	2317	2317	2317	2209	2209	2209	2111	2111	2111	2021	2021	1979
	1	2282	2235	2193	2155	2232	2191	2153	2119	2107	2078	2050	2030	2008	1986	1960	1942	1902
	2	2195	2114	2047	1991	2151	2079	2019	1968	2013	1964	1922	1952	1913	1879	1896	1865	1828
	3	2112	2007	1926	1862	2073	1979	1905	1846	1926	1865	1815	1877	1827	1784	1832	1791	1756
	4	2034	1912	1823	1755	1999	1889	1807	1744	1846	1777	1722	1806	1748	1700	1769	1720	1688
	5	1959	1826	1732	1664	1929	1807	1720	1656	1772	1697	1640	1739	1675	1624	1708	1653	1624
	6	1889	1747	1652	1584	1862	1732	1643	1578	1702	1624	1566	1675	1607	1555	1649	1590	1563
	7	1823	1675	1580	1513	1799	1662	1572	1508	1638	1558	1500	1614	1544	1491	1593	1530	1505
	8	1760	1609	1514	1449	1738	1598	1508	1445	1577	1496	1439	1557	1485	1432	1539	1474	1451
	9	1701	1548	1454	1390	1681	1538	1449	1388	1520	1439	1383	1503	1430	1378	1487	1421	1400
	10	1645	1491	1398	1337	1627	1483	1394	1335	1467	1386	1331	1452	1379	1327	1438	1371	1351

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	164.6 fc	3.5 ft
6.5 ft	117.8 fc	4.2 ft
7.5 ft	88.5 fc	4.8 ft
8.0 ft	77.8 fc	5.1 ft
10.0 ft	49.8 fc	6.4 ft
12.0 ft	34.6 fc	7.7 ft
14.0 ft	25.4 fc	9.0 ft
16.0 ft	19.4 fc	10.3 ft
20.0 ft	12.4 fc	12.8 ft
24.0 ft	8.6 fc	15.4 ft
28.0 ft	6.4 fc	18.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1091825	1091825	1091825
45.00°	2823	2764	2594
55.00°	1709	1724	1445
65.00°	2115	1556	1961
75.00°	4051	3149	2851
85.00°	4275	5078	3416

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	-1.1	-0.2	-0.7	0.2	0.5	-1.2	-0.4	-0.9	0.0	0.3
	3H	2.7	3.4	3.1	3.8	4.2	1.7	2.5	2.1	2.9	3.3
	4H	4.8	5.5	5.2	5.9	6.3	3.6	4.3	4.0	4.7	5.1
	6H	6.4	7.0	6.8	7.4	7.8	5.2	5.9	5.7	6.3	6.7
	8H	6.7	7.4	7.2	7.8	8.2	5.8	6.4	6.2	6.8	7.2
	12H	7.1	7.6	7.5	8.1	8.5	6.2	6.8	6.7	7.2	7.6
4H	2H	-0.3	0.4	0.1	0.8	1.2	-0.4	0.3	0.0	0.6	1.1
	3H	3.8	4.4	4.2	4.8	5.2	2.9	3.5	3.4	3.9	4.4
	4H	6.1	6.6	6.5	7.0	7.5	4.8	5.4	5.3	5.8	6.3
	6H	7.7	8.2	8.2	8.6	9.1	6.6	7.0	7.1	7.5	8.0
	8H	8.1	8.6	8.6	9.0	9.5	7.1	7.5	7.6	8.0	8.5
	12H	8.5	8.9	9.0	9.4	9.9	7.6	8.0	8.2	8.5	9.0
8H	4H	6.8	7.2	7.2	7.6	8.1	5.6	6.0	6.1	6.5	7.0
	6H	8.5	8.8	9.0	9.3	9.9	7.4	7.7	7.9	8.2	8.7
	8H	9.0	9.3	9.6	9.8	10.4	8.0	8.3	8.6	8.8	9.4
	12H	9.5	9.8	10.1	10.3	10.9	8.7	8.9	9.2	9.4	10.0
12H	4H	6.8	7.2	7.3	7.7	8.2	5.7	6.1	6.2	6.6	7.1
	6H	8.6	8.9	9.2	9.4	10.0	7.5	7.8	8.1	8.3	8.9
	8H	9.2	9.5	9.8	10.0	10.6	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