

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SR3Mx 07L 35K XN xx xx RDA3F 07L 35K XN MW GL (nadir)
Nom. 3" Round Adjustable A-Spec, Xtra Narrow Beam

Test Number

SP-01425

Test Date

10/10/2022

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

Summary of Results

Power

Input Watts	14.5 W
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Lumen Output

Output Lumens	987
Efficacy	68.05 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.27
Two luminaires, plane 90°	0.27
Four luminaires	0.29

Full Beam Angle

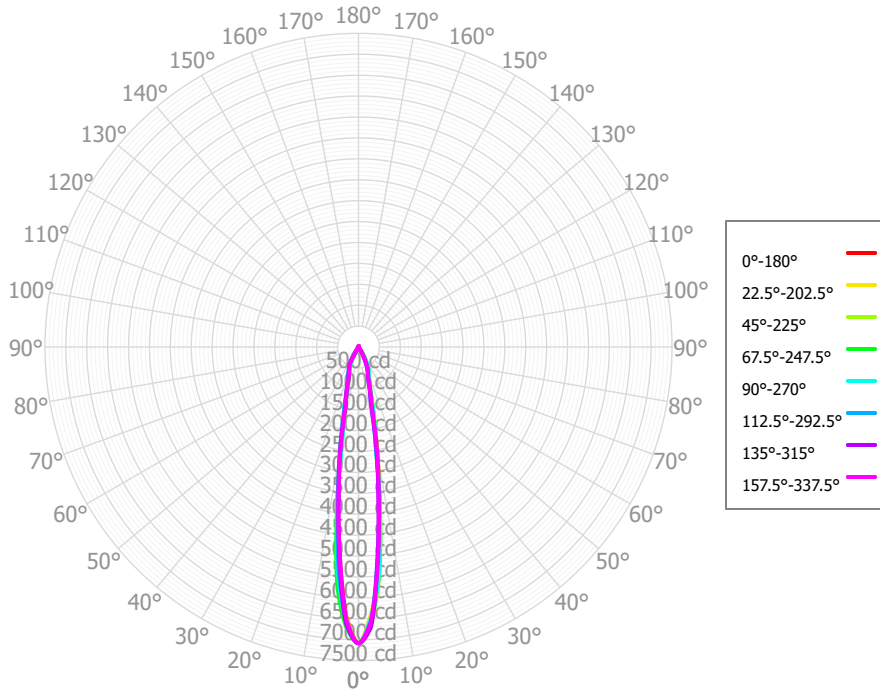
0° - 180°	16°
90° - 270°	16°

IES File Header Contents

Keyword	Value
TEST	SP-01425
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/10/2022
ISSUEDATE	10/25/2022
LUMCAT	SR3Mx 07L 35K XN xx xx RDA3F 07L 35K XN MW GL (nadir)
LUMINAIRE	Nom. 3" Round Adjustable A-Spec, Xtra Narrow Beam
OTHER	Matte White Trim, Glass Lens
OTHER	15.6 Degree Beam Angle
LAMP	N/A, 9mm LES
LAMPCAT	N/A, Min. 80 CRI
OTHER	Reference project SL167
OTHER	No thermal protection required for 7L, 10L, and 15L (non-IC)
OTHER	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 07L 35K XN xx xx RDA3F 07L 35K XN
 MW GL (nadir)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	411.85	41.74%	90.00° - 100.00°	1.93	0.20%
10.00° - 20.00°	321.27	32.56%	100.00° - 110.00°	1.85	0.19%
20.00° - 30.00°	203.82	20.66%	100.00° - 120.00°	3.65	0.37%
30.00° - 40.00°	22.83	2.31%	120.00° - 130.00°	1.74	0.18%
40.00° - 50.00°	2.71	0.27%	130.00° - 140.00°	1.90	0.19%
50.00° - 60.00°	2.48	0.25%	140.00° - 150.00°	2.05	0.21%
60.00° - 70.00°	2.38	0.24%	150.00° - 160.00°	2.52	0.26%
70.00° - 80.00°	2.13	0.22%	160.00° - 170.00°	1.27	0.13%
80.00° - 90.00°	1.99	0.20%	170.00° - 180.00°	0.19	0.02%
0.00° - 90.00°	971.44	98.45%	0.00° - 180.00°	986.70	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°	7084.12	7084.12	7084.12	7084.12	7084.12	7084.12	7084.12	7084.12	7084.12	7084.12	7084.12	7084.12	7084.12	7084.12	7084.12	7084.12	7084.12
2.50°	6525.65	6455.65	6622.18	6609.90	6526.41	6567.67	6646.91	6547.64	6494.96	6505.68	6679.48	6707.79	6584.61	6605.70	6723.07	6601.53	6525.65
5.00°	5391.36	5499.48	5596.56	5515.30	5536.28	5405.32	5169.94	5081.09	5112.57	5406.37	5409.21	5773.81	5530.10	5160.63	5171.93	5255.22	5391.36
7.50°	3797.85	3882.24	3920.26	3945.36	3892.22	3770.53	3637.15	3661.01	3748.80	3882.45	3913.56	3962.87	3896.12	3740.87	3644.34	3698.10	3797.85
10.00°	2602.94	2454.72	2553.48	2340.75	2374.91	2575.47	2532.56	2468.83	2415.85	2263.40	2306.36	2273.38	2202.60	2360.09	2464.62	2551.55	2602.94
12.50°	1610.86	1690.91	1712.92	1675.83	1687.95	1625.68	1438.56	1428.06	1445.95	1533.44	1475.35	1594.79	1548.01	1390.63	1351.92	1466.42	1610.86
15.00°	1097.56	1053.04	1097.71	1067.96	1071.91	1129.49	1112.24	1076.39	1050.49	988.56	1004.32	975.18	986.72	1017.83	1035.44	1074.08	1097.56
17.50°	816.36	829.57	848.45	864.04	880.33	870.95	796.52	773.52	770.53	780.56	773.59	796.47	795.85	755.93	738.99	775.64	816.36
20.00°	671.45	646.63	669.29	678.25	708.43	721.76	696.47	672.96	662.73	635.80	648.85	631.43	632.08	645.74	649.14	664.20	671.45
22.50°	588.41	587.01	598.91	616.10	641.87	627.16	596.82	579.45	568.33	559.50	545.22	556.02	538.38	524.42	553.78	575.54	588.41
25.00°	471.10	504.25	513.93	557.61	564.11	544.95	532.03	512.70	493.05	495.02	450.29	460.28	448.68	388.53	408.45	440.15	471.10
27.50°	339.24	356.15	407.58	406.18	432.28	468.52	463.34	413.46	360.00	299.03	278.33	242.67	249.10	245.38	264.18	299.88	339.24
30.00°	197.53	215.82	275.32	253.05	295.78	299.57	248.24	198.61	149.30	82.86	76.26	55.04	44.57	93.26	128.28	161.03	197.53
32.50°	51.85	96.25	107.32	130.65	138.34	89.43	41.05	30.58	25.29	34.51	16.52	28.08	22.51	9.51	9.42	22.31	51.85
35.00°	9.10	10.01	10.29	9.21	10.81	19.63	23.20	16.15	12.82	9.54	8.58	5.52	6.57	6.64	7.05	8.84	9.10
37.50°	5.68	6.78	6.90	6.24	8.22	8.22	6.20	5.19	5.66	6.19	5.71	4.82	4.31	4.58	4.98	4.70	5.68
40.00°	4.10	4.28	4.54	3.32	5.97	4.74	5.15	4.93	4.95	5.45	4.55	4.16	2.30	3.40	4.79	4.15	4.10
42.50°	3.17	3.50	3.48	3.05	5.03	4.39	4.13	4.62	4.22	4.57	3.67	3.72	2.66	2.73	4.55	3.80	3.17
45.00°	2.91	3.07	2.62	2.80	4.21	4.18	3.80	4.15	3.45	3.68	2.89	3.35	3.03	2.58	4.02	3.40	2.91
47.50°	2.87	3.39	2.01	3.20	3.85	4.02	3.45	3.64	3.02	3.40	2.66	3.21	2.81	2.52	3.57	3.00	2.87
50.00°	2.84	3.65	1.80	3.56	3.46	3.62	2.91	3.06	2.98	3.18	2.61	3.01	2.61	2.55	3.43	3.06	2.84
52.50°	2.83	3.82	2.07	3.07	3.01	3.13	2.43	2.65	2.82	3.01	2.62	2.56	2.61	2.96	3.26	3.13	2.83
55.00°	2.82	3.78	2.22	2.61	2.60	2.99	2.62	2.70	2.52	2.84	2.65	2.16	2.60	3.73	2.92	2.65	2.82
57.50°	2.82	3.31	2.25	2.65	2.36	2.96	2.79	2.80	2.34	2.75	2.55	2.00	2.16	3.73	2.61	2.15	2.82
60.00°	3.08	2.85	2.26	2.68	2.35	2.72	2.77	3.00	2.27	2.67	2.42	1.86	1.73	3.03	2.43	2.49	3.08
62.50°	3.41	2.43	2.26	2.63	3.03	2.40	2.73	3.02	2.30	2.47	2.29	1.82	1.68	2.51	2.29	2.84	3.41
65.00°	3.00	2.14	2.29	2.58	3.31	2.51	2.46	2.60	2.40	2.27	2.17	1.79	1.64	2.16	2.35	2.84	3.00
67.50°	2.41	2.09	2.34	2.57	2.53	2.74	2.26	2.34	2.47	2.09	1.96	1.81	2.01	1.96	2.37	2.83	2.41
70.00°	2.40	2.15	2.13	2.54	1.92	2.63	2.57	2.41	2.48	1.91	1.74	1.79	2.32	1.88	2.26	2.38	2.40
72.50°	2.52	2.41	1.67	2.25	1.70	2.44	2.83	2.34	2.39	1.88	1.55	1.65	1.92	1.75	2.15	1.95	2.52
75.00°	2.70	2.44	1.47	1.97	1.53	2.09	2.78	2.00	2.21	1.85	1.38	1.63	1.56	1.59	2.04	1.91	2.70
77.50°	2.89	2.11	1.49	1.71	1.49	1.69	2.68	1.90	2.24	1.83	1.67	1.93	1.57	1.86	1.89	1.87	2.89
80.00°	2.59	1.83	1.58	1.49	1.45	1.69	2.24	2.23	2.43	1.82	2.04	2.06	1.56	2.46	1.62	1.98	2.59
82.50°	2.20	1.62	1.73	1.51	1.44	1.77	1.88	2.25	2.30	1.78	2.03	1.76	1.49	2.42	1.49	2.07	2.20
85.00°	2.17	1.55	1.78	1.53	1.52	1.91	1.93	1.70	1.92	1.74	1.96	1.58	1.47	1.92	1.73	1.73	2.17
87.50°	2.21	1.70	1.74	1.46	1.78	2.06	1.96	1.52	1.80	1.69	2.04	1.67	1.85	1.78	1.93	1.40	2.21
90.00°	2.08	1.76	1.68	1.38	2.00	2.00	1.95	1.96	1.86	1.65	2.14	1.68	2.13	1.88	2.02	1.30	2.08
92.50°	1.92	1.72	1.60	1.21	2.11	1.91	1.90	2.21	1.73	1.92	1.81	1.50	1.76	1.98	2.07	1.26	1.92
95.00°	1.92	1.73	1.61	1.08	2.05	1.74	1.72	2.12	1.46	2.17	1.43	1.41	1.45	2.07	2.03	1.87	1.92
97.50°	1.94	1.78	1.69	1.19	1.65	1.56	1.65	2.04	1.46	1.94	1.64	1.50	1.58	2.04	1.94	2.35	1.94
100.00°	1.97	1.75	1.67	1.29	1.49	2.02	2.00	1.96	1.62	1.74	1.93	1.46	1.72	1.93	1.75	1.67	1.97

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	1171	1171	1171	1171	1142	1142	1142	1142	1088	1088	1088	1038	1038	1038	993	993	971
	1	1131	1109	1090	1073	1106	1087	1070	1055	1045	1032	1020	1006	996	987	971	963	943
	2	1093	1058	1028	1003	1072	1040	1013	991	1007	986	967	976	959	945	948	935	916
	3	1059	1013	978	949	1040	999	967	941	973	946	925	948	927	909	925	908	890
	4	1027	974	936	906	1010	963	928	900	942	912	888	922	897	877	903	883	866
	5	997	940	900	870	983	930	893	866	913	881	857	897	870	849	882	859	843
	6	969	909	868	839	956	901	863	836	887	854	829	873	845	823	860	836	822
	7	943	881	840	812	932	874	836	809	862	829	804	851	822	800	840	815	801
	8	919	855	815	787	909	850	812	786	839	806	782	830	800	778	821	794	782
	9	896	831	792	766	887	827	790	764	818	785	761	810	780	758	802	775	764
	10	874	810	771	746	866	806	769	744	798	765	742	791	761	740	784	757	746

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	234.2 fc	1.5 ft
6.5 ft	167.7 fc	1.8 ft
7.5 ft	125.9 fc	2.1 ft
8.0 ft	110.7 fc	2.2 ft
10.0 ft	70.8 fc	2.8 ft
12.0 ft	49.2 fc	3.4 ft
14.0 ft	36.1 fc	3.9 ft
16.0 ft	27.7 fc	4.5 ft
20.0 ft	17.7 fc	5.6 ft
24.0 ft	12.3 fc	6.7 ft
28.0 ft	9.0 fc	7.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1553410	1553410	1553410
45.00°	901	814	1307
55.00°	1080	851	995
65.00°	1558	1187	1717
75.00°	2288	1243	1297
85.00°	5470	4468	3825

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	-1.5	-0.6	-1.1	-0.2	0.1	-2.3	-1.4	-1.9	-1.1	-0.7
	3H	1.4	2.2	1.8	2.5	2.9	0.8	1.5	1.2	1.9	2.3
	4H	3.2	3.9	3.6	4.3	4.7	1.9	2.6	2.3	3.0	3.4
	6H	5.3	6.0	5.8	6.4	6.8	3.2	3.9	3.7	4.3	4.7
	8H	6.2	6.8	6.7	7.3	7.7	4.0	4.6	4.5	5.1	5.5
	12H	7.2	7.8	7.7	8.2	8.7	5.0	5.6	5.5	6.0	6.5
4H	2H	-0.8	-0.1	-0.4	0.3	0.7	-1.4	-0.7	-1.0	-0.3	0.1
	3H	2.3	2.9	2.7	3.3	3.8	1.9	2.5	2.3	2.9	3.4
	4H	4.2	4.7	4.7	5.2	5.7	3.2	3.8	3.7	4.2	4.7
	6H	6.4	6.9	6.9	7.4	7.9	4.8	5.3	5.3	5.8	6.3
	8H	7.4	7.9	7.9	8.3	8.8	5.7	6.1	6.2	6.6	7.1
	12H	8.6	9.0	9.1	9.5	10.0	6.8	7.2	7.3	7.7	8.2
8H	4H	4.6	5.0	5.1	5.5	6.0	4.0	4.4	4.5	4.9	5.4
	6H	7.0	7.3	7.5	7.8	8.4	6.0	6.3	6.5	6.8	7.4
	8H	8.2	8.5	8.7	9.0	9.6	7.1	7.4	7.6	7.9	8.4
	12H	9.6	9.8	10.1	10.4	11.0	8.4	8.6	8.9	9.2	9.8
12H	4H	4.7	5.1	5.2	5.6	6.1	4.2	4.6	4.8	5.1	5.6
	6H	7.1	7.4	7.7	7.9	8.5	6.3	6.6	6.9	7.1	7.7
	8H	8.5	8.7	9.0	9.2	9.8	7.6	7.8	8.1	8.4	9.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0