

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SR3Mx 10L 35K WW xx xx RNW3F 10L 35K WW MB NL
Nom 3 inch dia round open wall wash, matte black finish, no lens

Test Number

SP-01423_3

Test Date

10/11/2022

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

SR3Mx 10L 35K WW xx xx RNW3F 10L 35K WW
MB NL

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Summary of Results

Power

Input Watts	10 W
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Lumen Output

Output Lumens	845
Efficacy	84.46 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.99
Two luminaires, plane 90°	1.15
Four luminaires	1

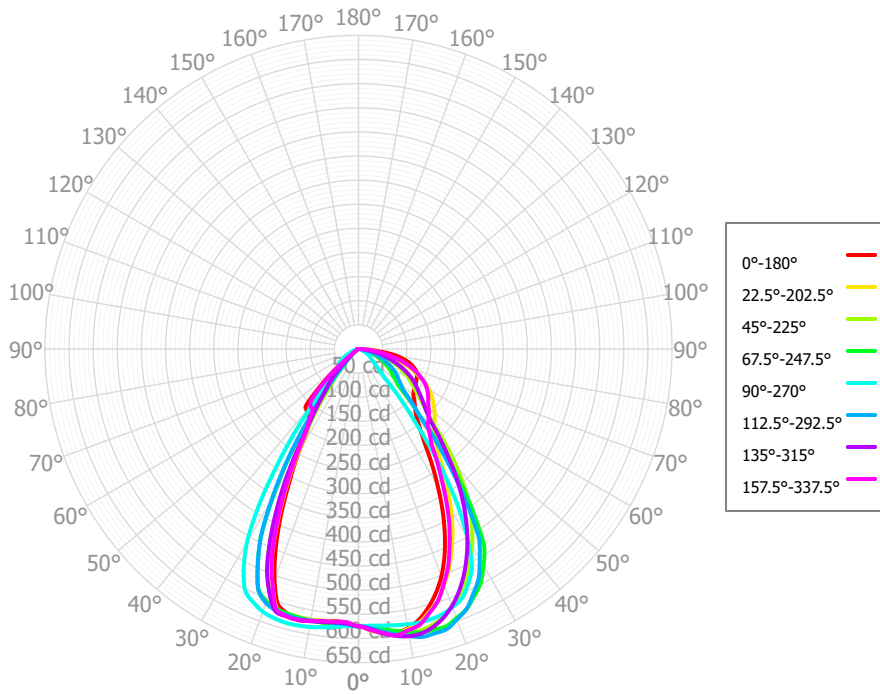
Full Beam Angle

0° - 180°	59°
90° - 270°	69°

IES File Header Contents

Keyword	Value
TEST	SP-01423_3
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/11/2022
ISSUEDATE	10/25/2022
LUMCAT	SR3Mx 10L 35K WW xx xx RNW3F 10L 35K WW MB NL
LUMINAIRE	Nom 3 inch dia round open wall wash, matte black finish, no lens
OTHER	Beam Angle: 61 x 72 degrees
LAMPCAT	N/A, 19mm LES
LAMP	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
OTHER	CCT Output Multipliers: 27K x 0.95, 30K x 0.97, 40K x 1.03
_CRI	80

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	56.31	6.67%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	162.23	19.21%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	215.12	25.47%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	164.80	19.51%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	95.18	11.27%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	62.86	7.44%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	48.90	5.79%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	30.11	3.56%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	9.12	1.08%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	844.61	100.00%	0.00° - 180.00°	844.61	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°	574.96	574.96	574.96	574.96	574.96	574.96	574.96	574.96	574.96	574.96	574.96	574.96	574.96	574.96	574.96	574.96	574.96
2.50°	583.16	584.72	581.91	578.54	574.34	570.84	569.82	567.07	567.75	568.24	570.85	571.95	575.02	579.63	581.40	583.50	583.16
5.00°	591.78	590.55	589.53	583.85	575.72	570.50	569.15	567.80	566.41	567.72	569.14	572.34	578.63	588.09	592.02	591.10	591.78
7.50°	593.96	595.85	594.93	589.30	577.68	570.44	570.90	568.81	568.87	567.93	569.73	572.55	581.97	596.99	599.98	598.66	593.96
10.00°	587.96	589.37	597.91	595.67	579.54	571.78	573.10	572.23	572.10	570.96	569.73	571.61	585.04	604.29	604.63	592.38	587.96
12.50°	575.68	581.34	597.08	602.09	581.33	572.63	575.56	575.09	575.76	573.37	569.34	570.44	586.76	611.46	603.79	585.72	575.68
15.00°	556.33	564.64	592.55	602.63	580.10	571.46	574.10	574.12	568.25	573.74	568.08	568.09	587.28	610.38	596.86	567.08	556.33
17.50°	531.87	547.11	582.52	602.93	577.00	568.71	570.73	566.11	555.42	563.05	566.32	564.73	584.67	608.91	584.56	547.88	531.87
20.00°	502.28	519.67	567.79	593.77	569.60	560.49	539.26	520.65	509.08	521.52	537.90	556.96	579.63	596.73	566.96	517.35	502.28
22.50°	465.89	491.63	549.09	584.20	559.85	542.31	495.82	470.58	448.84	470.76	496.23	540.71	569.07	584.25	544.22	486.17	465.89
25.00°	423.46	457.11	527.38	566.46	537.79	494.69	431.33	400.51	380.76	397.77	429.66	493.96	554.70	561.67	516.99	447.01	423.46
27.50°	377.50	422.40	501.00	547.82	509.79	438.11	359.09	330.70	309.88	325.56	352.29	438.07	515.89	538.54	485.76	407.38	377.50
30.00°	328.76	383.26	471.48	518.46	451.66	358.71	282.97	261.86	250.35	254.95	274.68	354.57	462.13	502.95	451.43	363.75	328.76
32.50°	283.30	344.19	438.26	484.91	380.84	277.60	205.63	203.14	194.30	196.92	196.98	271.67	384.49	464.69	413.76	320.95	283.30
35.00°	240.12	307.31	402.82	416.36	293.98	192.68	159.17	175.40	177.67	162.06	141.88	190.35	293.98	391.86	373.81	283.37	240.12
37.50°	210.17	271.32	359.99	346.02	201.28	122.72	120.95	155.36	171.22	137.38	94.00	120.82	213.58	319.47	331.24	248.84	210.17
40.00°	188.41	249.31	313.27	264.37	135.76	81.73	97.88	155.38	166.74	129.26	67.55	77.91	137.93	250.95	287.08	229.57	188.41
42.50°	174.69	228.63	266.66	189.40	78.72	49.83	78.15	145.31	162.69	111.44	46.89	45.46	98.68	187.15	248.27	212.66	174.69
45.00°	165.36	221.66	220.08	148.14	57.69	33.41	54.08	112.39	124.74	79.69	31.25	33.65	74.30	154.98	212.31	205.49	165.36
47.50°	156.85	214.51	192.08	112.54	46.14	21.24	29.24	78.54	80.97	50.82	16.75	24.33	62.50	126.16	190.95	198.06	156.85
50.00°	148.72	206.04	171.49	100.31	39.38	15.47	17.29	42.85	47.70	25.63	10.73	19.35	55.12	115.03	176.42	189.72	148.72
52.50°	144.41	197.48	155.74	89.27	33.67	10.91	7.12	17.01	15.83	10.07	6.26	15.21	50.96	104.73	163.71	182.08	144.41
55.00°	141.69	188.45	141.64	82.39	29.55	7.95	4.60	8.28	8.06	5.41	4.53	12.37	47.77	98.02	151.74	176.46	141.69
57.50°	139.60	179.21	129.74	75.16	25.70	5.96	2.87	2.79	2.61	2.84	3.20	9.93	42.20	90.82	141.19	170.51	139.60
60.00°	137.74	169.04	118.47	66.92	21.47	5.11	2.34	2.25	2.13	2.38	2.83	8.05	36.04	81.83	131.15	163.71	137.74
62.50°	135.70	157.82	107.12	58.58	17.19	4.34	1.90	1.94	1.96	2.21	2.56	6.34	29.52	72.75	119.31	155.63	135.70
65.00°	133.59	142.65	95.75	50.00	13.43	3.67	1.79	1.93	1.98	2.30	2.20	4.85	22.92	63.34	106.94	144.77	133.59
67.50°	129.92	127.32	83.78	41.84	9.73	3.16	1.68	1.88	2.01	2.25	1.83	3.80	18.15	54.16	93.40	133.10	129.92
70.00°	125.84	111.46	71.69	34.58	7.77	2.80	1.77	1.80	1.99	2.10	1.84	3.24	13.68	45.55	79.57	119.86	125.84
72.50°	117.58	95.68	60.77	27.42	5.92	2.50	1.86	1.77	1.97	2.02	1.87	2.84	10.49	36.92	67.47	105.29	117.58
75.00°	108.42	80.09	50.04	20.45	4.89	2.25	1.81	1.81	1.84	1.98	1.98	2.62	7.47	28.25	55.72	88.48	108.42
77.50°	94.39	64.52	39.11	14.47	3.90	2.13	1.76	1.79	1.73	1.98	2.08	2.45	5.60	20.26	44.15	71.18	94.39
80.00°	79.51	49.00	28.16	10.17	3.13	2.10	1.59	1.72	1.70	2.00	2.00	2.33	3.83	13.57	32.62	53.16	79.51
82.50°	56.14	33.41	18.68	6.55	2.36	2.02	1.46	1.69	1.67	2.01	1.93	2.17	3.16	8.11	21.66	35.31	56.14
85.00°	31.63	17.69	9.32	3.95	2.07	1.89	1.82	1.71	1.74	2.03	2.08	1.99	2.54	4.75	10.77	17.72	31.63
87.50°	16.80	6.53	5.44	2.36	1.78	1.88	2.12	1.77	1.81	2.02	2.20	1.87	2.11	2.49	6.20	6.68	16.80
90.00°	2.90	3.67	1.84	2.09	1.65	1.92	1.96	1.86	1.92	1.99	1.98	1.79	1.69	1.92	2.20	3.30	2.90

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	1005	1005	1005	1005	982	982	982	982	938	938	938	899	899	899	862	862	845
	1	939	907	879	853	917	889	863	840	854	833	813	821	805	789	792	778	762
	2	875	820	775	736	854	805	763	728	776	741	712	750	721	696	725	702	687
	3	816	745	690	647	797	733	682	641	709	666	630	687	651	620	667	636	623
	4	763	681	621	576	745	671	615	572	651	603	565	633	591	558	616	580	569
	5	715	626	564	518	699	617	559	516	601	550	511	585	541	506	571	532	522
	6	671	578	516	471	657	571	512	469	557	504	465	544	497	462	532	490	481
	7	631	536	474	431	618	530	471	429	518	465	427	507	459	424	496	454	446
	8	595	499	438	396	583	493	436	395	483	431	393	474	426	391	465	422	414
	9	562	466	407	367	552	461	405	366	452	401	364	444	397	363	436	393	387
	10	532	436	379	341	523	432	377	340	425	374	339	418	371	338	411	368	362

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	19.0 fc	6.2 ft
6.5 ft	13.6 fc	7.4 ft
7.5 ft	10.2 fc	8.5 ft
8.0 ft	9.0 fc	9.1 ft
10.0 ft	5.7 fc	11.3 ft
12.0 ft	4.0 fc	13.6 ft
14.0 ft	2.9 fc	15.8 ft
16.0 ft	2.2 fc	18.1 ft
20.0 ft	1.4 fc	22.6 ft
24.0 ft	1.0 fc	27.2 ft
28.0 ft	0.7 fc	31.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	126078	126078	126078
45.00°	51280	68250	17889
55.00°	54167	54151	11296
65.00°	69317	49679	6970
75.00°	91857	42391	4147
85.00°	79587	23439	5195

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	27.1	28.4	27.5	28.8	29.1	9.3	10.6	9.6	10.9	11.2
	3H	29.5	30.7	29.9	31.0	31.4	11.1	12.3	11.5	12.6	13.0
	4H	30.6	31.7	31.0	32.1	32.5	11.7	12.8	12.1	13.2	13.5
	6H	31.6	32.6	32.0	33.0	33.4	12.2	13.2	12.6	13.6	14.0
	8H	32.0	32.9	32.4	33.3	33.7	12.4	13.4	12.8	13.7	14.1
	12H	32.2	33.1	32.6	33.5	33.9	12.6	13.5	13.1	13.9	14.4
4H	2H	27.4	28.5	27.9	28.9	29.3	9.1	10.2	9.5	10.5	10.9
	3H	30.1	31.0	30.5	31.4	31.8	11.0	11.9	11.4	12.3	12.7
	4H	31.3	32.1	31.8	32.6	33.0	11.6	12.4	12.1	12.9	13.3
	6H	32.5	33.2	32.9	33.6	34.1	12.3	13.0	12.7	13.4	13.9
	8H	32.9	33.5	33.3	34.0	34.4	12.6	13.3	13.1	13.7	14.2
	12H	33.1	33.7	33.6	34.2	34.7	13.0	13.6	13.5	14.1	14.5
8H	4H	31.4	32.1	31.9	32.5	33.0	11.6	12.2	12.1	12.7	13.2
	6H	32.6	33.2	33.1	33.7	34.1	12.3	12.9	12.8	13.4	13.9
	8H	33.1	33.6	33.6	34.1	34.6	12.8	13.3	13.3	13.8	14.3
	12H	33.4	33.9	34.0	34.4	34.9	13.4	13.8	13.9	14.3	14.9
12H	4H	31.4	31.9	31.8	32.4	32.9	11.6	12.1	12.1	12.6	13.1
	6H	32.6	33.1	33.1	33.5	34.1	12.4	12.8	12.9	13.3	13.8
	8H	33.1	33.5	33.6	34.0	34.6	12.9	13.3	13.4	13.8	14.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0