

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

994 Jefferson Street  
Fall River, MA 02721  
+1.508.678.2303

## **Spectrum Lighting Photometric Lab**

### **Luminaire**

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

### **Test Number**

SP-01418\_2

### **Test Date**

10/11/2022

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

### Summary of Results

#### Power

Input Watts	10 W
-------------	------

#### Lumen Output

Output Lumens	723
Efficacy	72.27 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	1.06
Two luminaires, plane 90°	1.15
Four luminaires	1

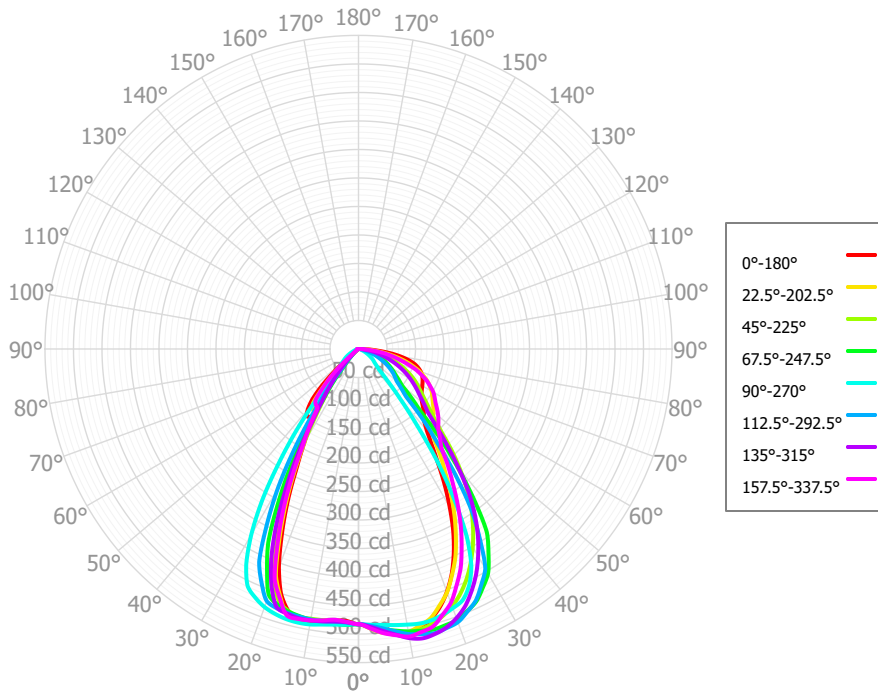
#### Full Beam Angle

0° - 180°	60°
90° - 270°	69°

### IES File Header Contents

Keyword	Value
TEST	SP-01418_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	10/11/2022
ISSUEDATE	10/25/2022
LUMCAT	SR3Mx 10L 35HK WW xx xx RNW3F 10L 35HK 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. 90 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	CCT Output Multipliers: 27HK x 0.92, 30HK x 0.96, 40HK x 1.03
OTHER	This report prepared by Spectrum Lighting

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	47.52	6.58%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	137.37	19.01%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	179.96	24.90%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	141.16	19.53%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	81.43	11.27%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	54.36	7.52%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	43.52	6.02%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	27.87	3.86%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	9.49	1.31%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	722.68	100.00%	0.00° - 180.00°	722.68	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°	482.88	482.88	482.88	482.88	482.88	482.88	482.88	482.88	482.88	482.88	482.88	482.88	482.88	482.88	482.88	482.88	482.88
2.50°	487.81	491.10	488.93	489.25	484.40	480.54	479.78	479.13	477.78	479.79	480.49	484.59	484.24	486.14	488.10	490.84	487.81
5.00°	498.80	500.06	495.50	493.57	485.91	480.22	479.93	476.89	477.99	477.45	479.06	483.81	485.36	491.94	496.68	500.34	498.80
7.50°	505.25	502.60	500.53	498.32	488.51	481.07	482.10	480.19	481.05	480.03	479.83	483.41	487.52	499.70	505.60	506.43	505.25
10.00°	506.39	504.14	504.25	503.14	491.03	481.68	483.32	483.34	484.32	482.65	480.46	482.64	490.65	507.75	515.06	512.20	506.39
12.50°	501.80	497.17	503.56	506.39	493.50	480.75	483.99	485.19	487.77	485.42	480.92	479.87	491.56	512.18	519.92	508.58	501.80
15.00°	490.62	488.93	499.17	509.41	492.89	479.57	480.96	484.24	475.65	483.62	475.62	476.61	490.50	516.11	517.68	504.15	490.62
17.50°	474.72	472.16	491.31	508.05	489.15	476.82	475.74	458.86	451.14	456.07	464.03	470.81	487.17	513.46	512.37	489.42	474.72
20.00°	453.49	454.19	480.61	506.02	483.90	470.58	445.26	429.97	408.32	423.45	432.10	459.42	481.82	509.94	502.44	473.84	453.49
22.50°	427.26	428.77	465.62	497.82	477.12	444.27	400.16	371.55	351.16	363.48	378.41	419.32	472.47	498.89	488.61	449.28	427.26
25.00°	395.52	402.33	447.16	488.72	458.66	412.32	341.70	312.87	293.18	303.65	318.64	374.49	459.64	486.89	469.01	424.01	395.52
27.50°	359.84	369.90	425.35	472.19	428.69	348.91	275.65	252.18	234.57	244.61	252.44	306.21	426.57	466.42	446.50	391.79	359.84
30.00°	319.90	336.69	400.91	454.63	379.72	284.20	212.53	194.33	191.04	190.45	192.96	237.94	376.27	444.92	419.76	359.07	319.90
32.50°	280.55	301.44	374.15	424.45	312.40	212.48	151.03	158.16	158.89	160.90	140.44	169.65	314.04	397.09	390.11	324.01	280.55
35.00°	241.83	265.95	345.60	392.57	241.76	144.12	111.08	125.96	146.38	135.76	102.99	107.02	241.89	346.22	356.31	288.80	241.83
37.50°	210.30	236.08	313.45	332.96	167.96	93.17	82.89	123.03	148.46	132.25	80.83	70.89	174.83	281.64	317.99	257.46	210.30
40.00°	186.30	206.88	278.53	269.73	112.39	48.12	60.46	117.33	138.47	124.28	58.89	39.28	111.94	215.54	273.32	226.35	186.30
42.50°	170.21	194.50	242.59	210.69	73.89	32.85	41.12	92.20	119.72	95.08	37.18	28.11	73.39	165.97	231.66	211.69	170.21
45.00°	162.27	184.06	205.90	152.16	51.00	19.26	26.03	66.75	89.33	65.97	21.35	18.18	54.46	118.11	194.18	197.95	162.27
47.50°	154.05	177.67	179.76	124.30	42.43	13.93	13.18	39.11	50.62	37.24	11.31	13.72	42.89	101.24	165.89	190.06	154.05
50.00°	145.53	171.71	161.43	100.07	36.46	9.22	7.01	14.31	25.76	12.73	5.57	9.77	37.11	87.44	150.06	182.48	145.53
52.50°	139.22	165.28	146.87	89.10	32.85	7.48	4.27	8.12	10.64	7.06	3.95	7.94	32.47	80.60	136.43	173.85	139.22
55.00°	135.12	158.81	135.05	79.64	28.73	5.90	3.04	2.73	3.69	2.36	2.90	6.26	28.73	74.40	125.74	165.17	135.12
57.50°	131.79	153.41	124.95	72.46	24.16	5.03	2.56	2.28	2.40	1.87	2.40	5.19	24.62	66.99	115.36	158.31	131.79
60.00°	129.23	148.11	116.08	65.53	20.03	4.18	2.28	1.92	1.90	1.49	2.18	4.18	20.23	59.47	105.40	151.53	129.23
62.50°	126.66	140.89	106.04	58.47	16.30	3.49	2.09	2.07	1.94	1.59	2.21	3.49	16.19	51.38	95.15	141.98	126.66
65.00°	124.10	133.48	95.17	51.39	12.93	2.86	2.02	2.18	1.92	1.67	2.13	2.87	12.41	43.23	84.53	132.33	124.10
67.50°	120.61	123.55	84.25	44.94	9.88	2.56	2.00	2.03	1.85	1.66	1.95	2.54	9.59	36.31	73.75	120.20	120.61
70.00°	116.24	113.40	73.29	38.55	7.70	2.28	1.98	1.89	1.85	1.66	1.82	2.29	7.47	29.47	62.79	107.99	116.24
72.50°	109.96	100.17	62.49	31.15	6.26	2.05	1.96	1.82	1.88	1.69	1.75	2.33	5.91	22.90	52.33	92.45	109.96
75.00°	101.89	86.68	51.81	23.66	4.96	1.88	1.97	1.79	1.92	1.72	1.73	2.35	4.76	16.35	42.50	76.82	101.89
77.50°	89.88	71.01	41.79	17.64	3.80	1.89	1.99	1.99	1.95	1.73	1.73	2.24	3.93	11.87	33.17	62.80	89.88
80.00°	74.25	55.17	32.21	11.75	3.05	1.91	1.93	2.15	1.99	1.73	1.76	2.13	3.33	7.52	24.47	48.81	74.25
82.50°	55.71	39.08	22.68	8.19	2.63	1.91	1.82	2.09	2.03	1.72	1.81	1.99	2.77	5.24	16.71	33.64	55.71
85.00°	34.59	22.98	13.18	4.82	2.31	1.89	1.86	2.03	1.96	1.69	1.78	1.87	2.25	3.10	10.07	18.44	34.59
87.50°	18.66	12.67	7.17	3.55	2.07	1.76	1.96	1.95	1.81	1.61	1.67	1.86	2.08	2.30	5.41	10.33	18.66
90.00°	7.32	2.75	3.39	2.44	2.02	1.64	2.01	1.90	1.75	1.57	1.60	1.85	2.15	1.58	3.08	2.32	7.32

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	860	860	860	860	840	840	840	840	803	803	803	769	769	769	737	737	723
	<b>1</b>	802	775	750	727	783	758	736	716	728	710	693	701	686	672	675	664	650
	<b>2</b>	747	699	659	626	729	686	650	619	661	631	605	639	614	592	618	597	585
	<b>3</b>	696	634	587	549	680	624	580	544	603	566	535	585	553	526	567	541	530
	<b>4</b>	650	580	528	488	635	571	522	485	554	512	479	538	502	473	523	493	483
	<b>5</b>	609	532	479	439	595	525	475	437	511	467	433	497	459	429	485	452	443
	<b>6</b>	571	491	437	399	559	485	434	397	473	428	394	462	422	391	451	416	408
	<b>7</b>	537	455	402	365	526	450	399	363	440	394	361	430	389	359	421	385	378
	<b>8</b>	507	424	371	335	497	419	369	335	410	365	333	402	361	331	394	357	351
	<b>9</b>	479	395	345	310	470	392	343	309	384	339	308	377	336	307	370	333	328
	<b>10</b>	453	370	321	288	445	367	320	288	360	317	287	354	314	286	348	311	306

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	16.0 fc	6.4 ft
6.5 ft	11.4 fc	7.6 ft
7.5 ft	8.6 fc	8.8 ft
8.0 ft	7.5 fc	9.3 ft
10.0 ft	4.8 fc	11.7 ft
12.0 ft	3.4 fc	14.0 ft
14.0 ft	2.5 fc	16.3 ft
16.0 ft	1.9 fc	18.7 ft
20.0 ft	1.2 fc	23.3 ft
24.0 ft	0.8 fc	28.0 ft
28.0 ft	0.6 fc	32.7 ft

### Average Luminaire Luminance [cd/m<sup>2</sup>]

	0.00°	45.00°	90.00°
<b>0.00°</b>	105886	105886	105886
<b>45.00°</b>	50322	63851	15817
<b>55.00°</b>	51656	51629	10983
<b>65.00°</b>	64392	49380	6711
<b>75.00°</b>	86327	43892	4204
<b>85.00°</b>	87015	33150	5819

### 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	26.9	28.2	27.3	28.6	28.9	6.9	8.2	7.3	8.5	8.9
	3H	29.4	30.6	29.8	31.0	31.3	8.9	10.0	9.2	10.4	10.7
	4H	30.6	31.7	31.0	32.1	32.5	9.7	10.8	10.1	11.1	11.5
	6H	31.7	32.7	32.1	33.1	33.4	10.4	11.4	10.8	11.8	12.2
	8H	32.1	33.0	32.5	33.4	33.8	10.8	11.8	11.2	12.1	12.6
	12H	32.3	33.2	32.8	33.6	34.1	11.2	12.2	11.7	12.5	13.0
4H	2H	27.2	28.3	27.6	28.7	29.1	6.8	7.9	7.2	8.2	8.6
	3H	30.0	30.9	30.4	31.3	31.7	8.8	9.7	9.2	10.1	10.5
	4H	31.4	32.2	31.8	32.6	33.1	9.7	10.5	10.1	10.9	11.4
	6H	32.6	33.3	33.0	33.7	34.2	10.7	11.4	11.1	11.8	12.3
	8H	33.0	33.7	33.5	34.1	34.6	11.2	11.9	11.7	12.3	12.8
	12H	33.3	33.9	33.8	34.4	34.9	11.9	12.5	12.4	13.0	13.4
8H	4H	31.4	32.1	31.9	32.5	33.0	9.7	10.4	10.2	10.8	11.3
	6H	32.7	33.3	33.2	33.8	34.3	10.9	11.4	11.4	11.9	12.4
	8H	33.3	33.8	33.8	34.3	34.8	11.6	12.1	12.1	12.6	13.1
	12H	33.7	34.2	34.2	34.6	35.2	12.5	12.9	13.0	13.4	14.0
12H	4H	31.4	32.0	31.9	32.5	32.9	9.7	10.3	10.2	10.8	11.3
	6H	32.7	33.2	33.2	33.7	34.2	10.9	11.4	11.5	11.9	12.4
	8H	33.3	33.7	33.8	34.2	34.8	11.7	12.2	12.3	12.7	13.2

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0