

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

CR2 835 10L xx xx WW BW TB xx
Nom 2.5 inch dia CR2 wall wash cylinder with black bezel

Test Number

SP-01270_1

Test Date

9/21/2021

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

Summary of Results

Power

Input Watts	12.5 W
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Lumen Output

Output Lumens	769
Efficacy	61.52 lm/W

Luminous Dimensions

0° - 180° Size	-0.21
90° - 270° Size	-0.21
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.35
Two luminaires, plane 90°	0.82
Four luminaires	1.04

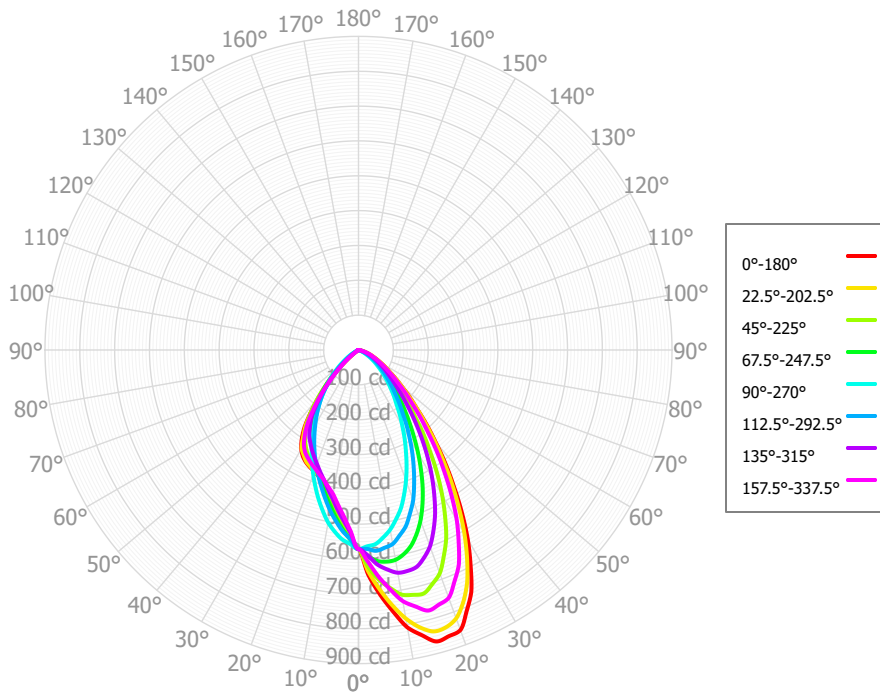
Full Beam Angle

0° - 180°	46°
90° - 270°	33°

IES File Header Contents

Keyword	Value
TEST	SP-01270_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	9/21/2021
ISSUEDATE	11/5/2021
LUMCAT	CR2 835 10L xx xx WW BW TB xx
LUMINAIRE	Nom 2.5 inch dia CR2 wall wash cylinder with black bezel
OTHER	Beam Angle: 46 X 33 degrees
LAMPCAT	N/A
LAMP	N/A, 6mm LES
OTHER	80 CRI, 35K tested
OTHER	CCT Output Multipliers: 822 x 0.75, 827 x 0.93, 830 x 1.0, 840 x 1.0
OTHER	CCT Output Multipliers: 927 x 0.81, 930 x 0.81, 935 x 0.81, 940HK x 0.87
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	54.84	7.13%	90.00° - 100.00°	0.00	0.00%
10.00° - 20.00°	150.47	19.57%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	200.96	26.13%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	179.12	23.29%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	107.83	14.02%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	47.99	6.24%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	19.80	2.57%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	6.32	0.82%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.74	0.23%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	769.06	100.00%	0.00° - 180.00°	769.06	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°	571.69	571.69	571.69	571.69	571.69	571.69	571.69	571.69	571.69	571.69	571.69	571.69	571.69	571.69	571.69	571.69	571.69
2.50°	646.20	635.47	622.27	591.80	564.28	543.20	524.86	520.16	540.66	534.20	541.77	544.47	557.25	571.75	589.30	607.28	646.20
5.00°	703.88	688.60	661.01	607.86	559.26	522.12	491.62	479.88	494.07	489.85	502.78	517.18	545.40	578.64	617.99	652.23	703.88
7.50°	756.63	738.53	688.45	612.81	542.91	495.45	461.54	448.31	458.92	455.91	469.56	487.36	525.57	572.69	635.68	692.47	756.63
10.00°	808.75	782.94	712.99	611.65	523.63	468.15	431.95	420.04	427.16	424.85	439.17	456.62	502.70	565.38	649.20	731.95	808.75
12.50°	838.38	815.91	720.02	600.31	497.72	438.46	408.11	401.83	407.33	404.66	414.96	428.91	473.18	545.21	649.70	754.07	838.38
15.00°	866.22	836.30	723.55	582.22	470.42	409.21	384.87	385.51	390.01	386.82	393.39	402.10	442.94	524.17	644.63	774.26	866.22
17.50°	861.59	834.76	704.56	554.28	435.16	381.34	366.35	373.94	379.86	377.84	376.81	379.14	411.37	491.70	625.35	766.72	861.59
20.00°	855.53	819.93	682.26	520.60	398.65	353.84	348.15	362.93	370.74	370.30	362.28	357.09	380.08	458.81	600.04	757.15	855.53
22.50°	811.37	784.83	640.07	479.81	360.57	327.26	332.22	353.14	364.16	362.14	351.05	334.20	349.23	417.11	561.94	719.65	811.37
25.00°	766.20	737.74	595.75	435.85	322.32	300.68	316.33	342.76	356.07	353.91	338.24	311.16	318.07	375.46	520.13	681.13	766.20
27.50°	696.94	675.05	538.22	388.54	286.79	274.10	299.59	331.34	344.95	340.50	323.25	290.12	286.50	334.84	471.48	622.93	696.94
30.00°	627.24	607.95	479.88	342.16	251.45	248.35	282.55	313.53	328.54	326.70	305.90	269.35	256.18	294.50	422.25	564.41	627.24
32.50°	551.37	535.92	420.34	296.65	220.74	224.13	259.28	285.93	303.06	295.86	285.71	246.84	227.32	257.13	372.13	498.17	551.37
35.00°	476.35	466.54	360.86	255.60	190.23	200.30	234.99	252.06	269.40	264.46	258.02	224.18	200.74	220.79	323.44	432.38	476.35
37.50°	408.55	399.77	308.17	218.11	166.98	177.06	199.54	209.74	223.47	218.21	222.63	196.76	176.45	191.86	276.67	371.74	408.55
40.00°	342.58	338.49	256.15	185.98	143.89	152.87	164.19	167.79	178.51	172.23	184.50	169.13	153.34	163.98	234.14	312.56	342.58
42.50°	287.39	281.83	216.67	157.52	124.32	127.37	129.53	126.27	134.79	132.89	143.97	139.32	131.22	141.88	196.60	264.34	287.39
45.00°	235.26	234.44	178.30	133.71	105.01	103.16	96.17	90.95	96.86	94.29	107.92	109.59	110.44	120.83	164.68	218.07	235.26
47.50°	197.20	193.69	151.19	112.69	88.59	80.47	70.00	61.75	65.27	64.36	75.35	83.57	90.65	104.14	138.41	182.86	197.20
50.00°	161.33	160.37	125.09	95.72	72.66	60.87	45.52	37.73	39.19	35.97	49.97	58.13	72.79	88.30	116.59	149.74	161.33
52.50°	133.48	131.72	106.23	80.80	60.20	44.38	28.14	18.09	18.45	20.08	29.34	40.76	56.17	75.30	98.60	125.60	133.48
55.00°	108.33	108.97	88.06	68.02	47.95	30.40	13.44	7.47	6.89	6.14	16.31	24.19	42.64	62.68	83.54	103.00	108.33
57.50°	91.16	89.38	73.53	56.14	36.87	18.64	7.67	3.56	2.92	3.39	7.54	14.85	30.78	51.11	70.70	85.64	91.16
60.00°	75.02	73.53	59.93	46.65	26.49	10.85	3.08	1.83	1.31	1.18	3.68	6.47	21.17	40.16	58.90	69.74	75.02
62.50°	61.43	59.37	50.05	38.03	19.12	6.06	1.82	1.49	1.37	1.30	2.18	4.18	12.62	30.66	47.77	58.02	61.43
65.00°	49.07	48.87	40.49	29.58	12.36	3.55	1.05	1.43	1.36	1.40	1.74	2.24	7.67	21.90	39.22	47.30	49.07
67.50°	39.29	39.78	31.96	21.19	7.65	2.50	1.43	1.52	1.32	1.38	1.73	1.94	4.14	14.59	32.09	38.95	39.29
70.00°	30.38	30.99	23.90	14.27	3.86	2.06	1.63	1.41	1.49	1.39	1.61	1.73	2.60	8.72	24.27	30.49	30.38
72.50°	23.00	22.29	17.11	7.69	2.69	1.94	1.49	1.22	1.79	1.46	1.46	1.81	1.70	5.25	16.13	21.82	23.00
75.00°	15.98	15.54	11.02	4.92	1.76	1.69	1.45	1.20	1.62	1.51	1.42	1.88	1.37	2.82	10.47	14.36	15.98
77.50°	9.53	9.27	6.52	2.86	1.37	1.38	1.60	1.25	1.23	1.47	1.40	1.89	1.20	1.86	5.80	9.03	9.53
80.00°	4.87	5.58	3.19	2.30	1.14	1.28	1.61	1.25	1.19	1.45	1.46	1.87	1.17	1.38	3.46	4.97	4.87
82.50°	2.58	2.42	2.08	1.94	1.19	1.27	1.42	1.25	1.27	1.49	1.52	1.73	1.17	1.51	1.87	2.80	2.58
85.00°	1.37	1.63	1.41	1.60	1.24	1.26	1.29	1.27	1.20	1.53	1.48	1.54	1.27	1.54	1.59	1.52	1.37
87.50°	1.38	1.21	1.47	1.26	1.30	1.26	1.23	1.31	1.08	1.59	1.41	1.23	1.39	1.48	1.66	1.35	1.38
90.00°	1.34	1.37	1.47	1.51	1.37	1.33	1.23	1.56	1.20	1.57	1.41	1.17	1.27	1.47	1.60	1.28	1.34

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	916	916	916	916	894	894	894	894	855	855	855	818	818	818	785	785	769
	1	864	839	816	796	844	822	802	783	790	774	759	761	748	736	735	724	710
	2	811	766	729	698	793	753	719	690	727	699	675	703	680	660	682	663	650
	3	760	701	656	620	744	690	648	614	669	634	604	650	620	595	632	607	594
	4	712	644	593	555	697	634	588	551	617	577	545	601	566	538	586	556	545
	5	669	593	540	501	655	585	536	499	571	527	494	557	519	489	544	511	501
	6	628	548	494	455	616	541	491	454	529	484	450	517	478	447	507	471	463
	7	591	508	454	416	580	502	451	415	492	446	413	482	441	410	473	436	428
	8	557	473	419	383	547	468	417	382	459	413	380	450	409	378	442	405	398
	9	526	441	389	354	517	437	387	353	429	383	352	422	380	350	415	377	371
	10	498	413	362	328	489	409	360	327	402	357	326	396	355	325	390	352	346

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	18.9 fc	5.8 ft
6.5 ft	13.5 fc	6.9 ft
7.5 ft	10.2 fc	8.0 ft
8.0 ft	8.9 fc	8.5 ft
10.0 ft	5.7 fc	10.6 ft
12.0 ft	4.0 fc	12.7 ft
14.0 ft	2.9 fc	14.8 ft
16.0 ft	2.2 fc	17.0 ft
20.0 ft	1.4 fc	21.2 ft
24.0 ft	1.0 fc	25.5 ft
28.0 ft	0.7 fc	29.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	177665	177665	177665
45.00°	103398	78361	46150
55.00°	58696	47710	25981
65.00°	36085	29773	9091
75.00°	19192	13237	2111
85.00°	4889	5028	4436

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	24.2	25.4	24.6	25.7	26.1	13.8	15.0	14.1	15.3	15.6
	3H	25.0	26.1	25.4	26.4	26.8	13.8	14.9	14.2	15.2	15.6
	4H	25.2	26.2	25.6	26.5	26.9	13.8	14.8	14.2	15.1	15.5
	6H	25.2	26.1	25.6	26.5	26.8	13.8	14.7	14.2	15.0	15.4
	8H	25.1	26.0	25.6	26.4	26.8	13.8	14.6	14.2	15.0	15.4
	12H	25.1	25.9	25.5	26.3	26.7	13.8	14.6	14.2	15.0	15.4
4H	2H	24.3	25.3	24.7	25.7	26.0	13.5	14.5	13.9	14.9	15.2
	3H	25.3	26.1	25.7	26.5	26.9	13.6	14.4	14.0	14.8	15.2
	4H	25.5	26.2	25.9	26.6	27.0	13.6	14.3	14.0	14.7	15.2
	6H	25.5	26.1	26.0	26.5	27.0	13.6	14.3	14.1	14.7	15.2
	8H	25.4	26.0	25.9	26.5	26.9	13.7	14.3	14.2	14.7	15.2
	12H	25.4	25.9	25.9	26.4	26.9	13.8	14.3	14.3	14.8	15.3
8H	4H	25.4	25.9	25.8	26.4	26.9	13.5	14.1	14.0	14.5	15.0
	6H	25.4	25.9	25.9	26.4	26.8	13.6	14.1	14.1	14.6	15.0
	8H	25.4	25.8	25.9	26.3	26.8	13.7	14.1	14.2	14.7	15.1
	12H	25.3	25.7	25.8	26.2	26.8	14.0	14.3	14.5	14.8	15.4
12H	4H	25.3	25.8	25.8	26.3	26.8	13.5	14.0	13.9	14.4	14.9
	6H	25.3	25.8	25.9	26.2	26.8	13.6	14.0	14.1	14.5	15.0
	8H	25.3	25.7	25.8	26.2	26.8	13.8	14.1	14.3	14.6	15.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0