

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

IF03RSx IC 835 015 N11 DLWFGC MW

Test Number

SP-00777_M-015L

Test Date

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

Summary of Results

Power

Input Watts	10.2 W
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Lumen Output

Output Lumens	938
Efficacy	91.96 lm/W

Luminous Dimensions

0° - 180° Size	-0.2
90° - 270° Size	-0.2
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.96
Two luminaires, plane 90°	0.96
Four luminaires	0.9

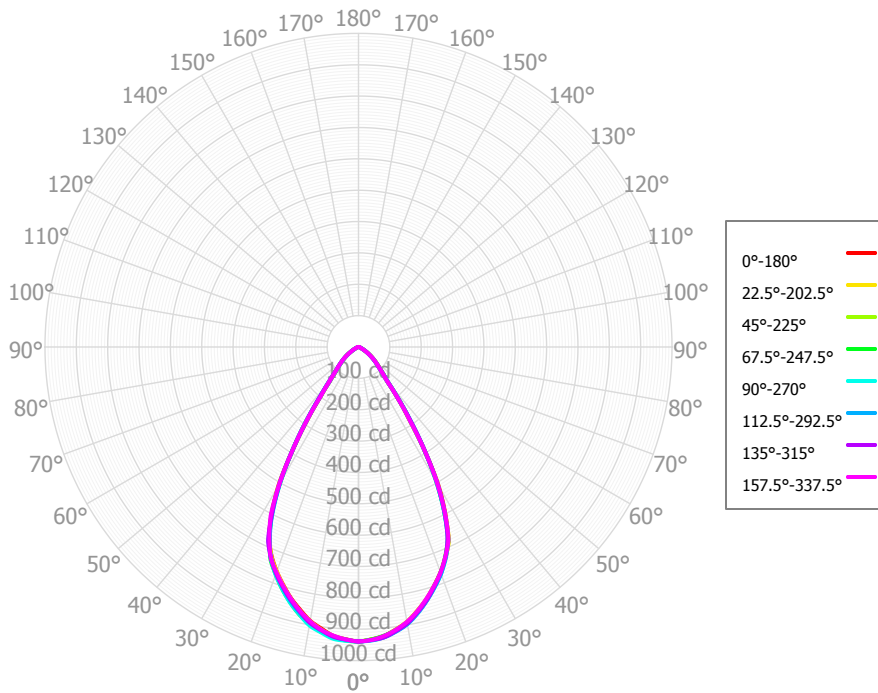
Full Beam Angle

0° - 180°	62°
90° - 270°	61°

IES File Header Contents

Keyword	Value
TEST	SP-00777_M-015L
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/8/2019
UPDATE	4/3/2019
LUMCAT	IF03RSx IC 835 015 N11 DLWFGC MW
LUMINIARE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 62 degrees
OTHER	Wide flood optic, Clear glass lens
OTHER	Aluminum bezel contains lens
LAMPCAT	N/A
LAMP	N/A, CRI: 80, Philips
OTHER	CCT Multiplier: 27K x 0.95, 30K x 0.98, 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting, scaled from 20L
_CRI	80
_CCTMULT	27K x 0.95, 30K x 0.98, 40K x 1.03
_LAMPMULT	07L x 0.40, 10L x 0.56

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	88.61	9.45%	90.00° - 100.00°	0.05	0.01%
10.00° - 20.00°	234.06	24.95%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	300.45	32.03%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	185.32	19.76%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	74.90	7.99%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	38.04	4.06%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	12.34	1.32%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	3.18	0.34%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.00	0.11%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	937.90	99.99%	0.00° - 180.00°	937.95	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°	939.16	939.16	939.16	939.16	939.16	939.16	939.16	939.16	939.16	939.16	939.16	939.16	939.16	939.16	939.16	939.16	939.16
2.50°	934.16	933.45	934.10	933.77	935.81	935.02	933.88	933.62	933.22	934.08	933.57	937.16	937.77	937.14	935.60	935.31	934.16
5.00°	926.34	925.51	925.69	924.59	929.36	926.16	927.49	923.93	924.66	925.66	925.45	929.16	933.87	929.75	930.02	925.36	926.34
7.50°	909.41	909.17	909.89	911.25	914.34	912.59	910.75	909.92	906.12	909.11	910.90	916.74	918.11	915.81	914.01	909.96	909.41
10.00°	891.06	889.66	892.73	893.17	896.74	892.96	893.39	888.45	886.99	888.42	892.83	896.88	901.74	897.65	895.54	890.06	891.06
12.50°	863.52	862.61	864.23	868.03	867.90	868.12	864.34	862.01	858.84	862.02	866.63	873.53	873.07	870.66	867.43	863.55	863.52
15.00°	834.71	833.35	834.41	836.12	837.99	838.22	835.00	831.61	830.09	831.95	837.66	842.80	844.02	839.10	837.50	832.60	834.71
17.50°	800.19	800.39	799.91	802.46	804.59	804.69	802.25	799.04	796.63	797.78	803.60	809.38	808.97	805.10	802.22	799.58	800.19
20.00°	764.87	766.63	765.11	767.43	769.02	768.53	768.81	764.96	762.28	762.17	767.61	771.89	772.99	770.09	765.42	765.42	764.87
22.50°	726.95	724.94	723.42	723.37	728.02	730.85	728.56	730.22	723.35	725.21	728.70	733.27	728.99	725.55	725.18	723.75	726.95
25.00°	677.86	682.09	679.70	673.62	673.28	669.14	682.08	672.34	676.25	670.17	673.03	669.83	678.32	677.91	671.99	678.78	677.86
27.50°	599.56	595.51	592.60	593.38	591.15	596.40	595.69	606.59	598.23	601.39	596.79	601.21	591.22	592.81	594.79	596.73	599.56
30.00°	509.27	505.13	503.38	497.26	500.01	500.10	504.83	505.28	510.03	505.51	503.25	500.04	500.16	498.74	504.59	502.06	509.27
32.50°	394.40	392.27	392.13	394.39	394.29	395.08	394.45	394.75	392.89	393.03	392.43	394.38	393.90	394.12	394.99	394.06	394.40
35.00°	290.78	279.48	285.63	288.74	296.83	298.21	291.30	294.52	286.21	292.15	292.54	296.28	293.32	287.76	294.73	282.52	290.78
37.50°	205.56	207.63	208.44	212.29	210.17	203.63	211.30	196.23	203.07	197.15	201.78	198.77	209.76	211.72	205.75	207.89	205.56
40.00°	144.72	139.07	141.30	145.05	149.29	154.66	145.97	151.19	140.04	146.03	146.03	153.17	142.84	138.95	145.69	140.22	144.72
42.50°	117.08	116.18	116.81	114.35	116.26	114.87	117.98	112.51	113.43	112.36	114.02	109.67	114.40	113.81	114.86	113.67	117.08
45.00°	95.73	94.37	94.57	92.52	93.03	96.06	94.46	95.31	92.06	92.24	93.00	93.83	91.01	91.03	92.73	92.05	95.73
47.50°	81.34	80.86	79.65	78.09	78.53	80.19	79.90	79.45	78.32	76.23	77.97	78.19	76.87	77.33	77.75	78.49	81.34
50.00°	67.73	67.44	65.58	64.91	65.20	67.57	66.43	66.90	65.42	64.33	65.03	65.13	63.53	63.73	64.54	65.48	67.73
52.50°	54.80	54.54	53.60	52.85	52.69	55.20	54.69	54.41	53.51	53.39	53.02	52.41	51.40	52.04	52.50	53.56	54.80
55.00°	43.37	42.29	42.17	40.91	41.83	42.68	43.26	42.47	42.30	42.19	41.76	42.23	40.69	40.69	41.55	41.74	43.37
57.50°	33.06	32.47	31.82	31.50	31.95	30.29	32.26	30.99	31.79	30.95	30.76	32.30	31.71	32.38	31.21	31.87	33.06
60.00°	24.44	23.52	22.90	22.23	23.86	22.80	23.35	24.30	23.35	23.17	23.57	23.64	23.63	24.24	22.91	22.33	24.44
62.50°	16.84	16.98	16.32	16.55	16.63	15.58	16.70	17.81	16.59	15.72	17.37	15.95	16.47	17.02	15.52	16.49	16.84
65.00°	12.02	11.55	11.27	11.06	11.84	11.49	11.67	12.49	11.55	11.18	12.18	11.71	11.37	10.68	10.80	11.01	12.02
67.50°	8.54	8.47	8.22	8.33	7.96	7.67	7.99	7.84	7.61	7.01	7.17	8.07	7.93	7.74	7.02	7.57	8.54
70.00°	5.96	5.90	5.76	5.77	5.67	4.99	5.43	5.18	5.54	5.53	5.90	5.69	5.34	5.32	5.04	4.90	5.96
72.50°	3.69	3.92	3.75	3.78	3.77	3.21	3.38	3.63	4.12	4.10	4.44	3.75	3.18	3.85	3.50	4.03	3.69
75.00°	2.59	2.83	2.99	2.69	2.55	2.45	2.44	3.13	3.35	2.77	2.35	2.15	2.43	2.95	2.94	3.11	2.59
77.50°	1.74	2.15	2.32	2.30	1.91	2.17	1.80	2.09	2.33	1.97	1.94	1.74	1.92	2.31	2.23	2.19	1.74
80.00°	1.19	1.84	1.43	2.03	1.68	1.78	1.46	1.57	1.38	1.56	1.70	1.54	1.53	1.60	1.45	1.50	1.19
82.50°	0.97	1.02	1.09	1.24	0.93	1.03	1.27	1.21	1.00	1.33	1.04	1.21	0.94	1.01	0.91	1.25	0.97
85.00°	0.99	0.78	0.97	0.81	1.02	0.71	0.88	0.78	0.82	0.92	0.58	0.76	0.59	0.89	0.98	1.02	0.99
87.50°	0.75	0.90	0.64	0.75	0.79	0.43	0.79	0.70	0.88	0.90	0.83	0.63	0.85	0.69	0.85	0.83	0.75
90.00°	0.93	0.78	0.53	0.75	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.87	0.73	0.93
92.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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%	10%
	0	1,117	1,117	1,117	1,117	1,091	1,091	1,091	1,091	1,042	1,042	1,042	998	998	998	957	957	957
	1	1,061	1,033	1,008	986	1,037	1,013	990	970	974	957	940	939	925	912	907	896	878
	2	1,004	955	914	881	982	938	902	871	908	878	851	880	855	833	853	833	815
	3	949	884	835	795	929	871	825	788	846	808	776	823	791	763	802	775	760
	4	897	821	766	724	879	811	759	720	790	746	711	771	733	702	753	721	694
	5	848	765	707	664	832	756	702	661	739	691	655	723	681	649	708	672	643
	6	803	714	655	612	789	707	651	610	692	643	606	679	635	602	666	628	598
	7	761	669	609	568	748	663	606	566	650	600	563	639	594	560	628	588	557
	8	722	628	569	528	710	623	566	527	612	561	525	602	556	523	593	551	520
	9	686	591	533	494	675	586	531	493	577	527	491	569	522	489	561	518	487
	10	653	558	501	463	643	553	499	462	546	495	461	538	492	459	531	489	458

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	31.0 fc	6.6 ft
6.5 ft	22.2 fc	7.7 ft
7.5 ft	16.7 fc	8.9 ft
8.0 ft	14.7 fc	9.5 ft
10.0 ft	9.4 fc	11.9 ft
12.0 ft	6.5 fc	14.3 ft
14.0 ft	4.8 fc	16.7 ft
16.0 ft	3.7 fc	19.1 ft
20.0 ft	2.3 fc	23.8 ft
24.0 ft	1.6 fc	28.6 ft
28.0 ft	1.2 fc	33.4 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	321,780	321,780	321,780
45.00°	46,385	45,825	45,076
55.00°	25,907	25,190	24,990
65.00°	9,743	9,140	9,598
75.00°	3,429	3,953	3,374
85.00°	3,896	3,824	4,021

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	17.0	18.1	17.4	18.4	18.7	16.8	17.9	17.2	18.2	18.5
	3H	17.2	18.1	17.5	18.4	18.8	16.9	17.9	17.3	18.2	18.6
	4H	17.1	18.0	17.5	18.3	18.7	16.9	17.8	17.3	18.1	18.5
	6H	17.1	17.9	17.5	18.2	18.6	16.9	17.7	17.3	18.0	18.4
	8H	17.0	17.8	17.5	18.2	18.6	16.8	17.6	17.3	18.0	18.4
	12H	17.0	17.7	17.4	18.1	18.5	16.8	17.5	17.2	17.9	18.3
4H	2H	16.9	17.8	17.3	18.2	18.6	16.8	17.7	17.2	18.0	18.4
	3H	17.1	17.8	17.5	18.2	18.7	17.0	17.7	17.4	18.1	18.5
	4H	17.1	17.7	17.6	18.2	18.6	16.9	17.6	17.4	18.0	18.4
	6H	17.1	17.6	17.6	18.1	18.5	16.9	17.5	17.4	17.9	18.4
	8H	17.0	17.5	17.5	18.0	18.5	16.9	17.4	17.3	17.8	18.3
	12H	17.0	17.4	17.5	17.9	18.4	16.8	17.3	17.3	17.8	18.2
8H	4H	17.0	17.5	17.5	18.0	18.4	16.8	17.3	17.3	17.8	18.2
	6H	17.0	17.4	17.5	17.9	18.4	16.8	17.2	17.3	17.7	18.2
	8H	17.0	17.3	17.5	17.8	18.3	16.8	17.1	17.3	17.7	18.2
	12H	17.0	17.3	17.5	17.8	18.3	16.8	17.1	17.3	17.6	18.2
12H	4H	17.0	17.4	17.4	17.9	18.4	16.8	17.2	17.3	17.7	18.2
	6H	16.9	17.3	17.5	17.8	18.3	16.8	17.1	17.3	17.6	18.1
	8H	16.9	17.2	17.4	17.7	18.3	16.8	17.1	17.3	17.6	18.1

Corrected UGR values based on total output lumens

SHR = 1.0