

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03SSx IC 835 015 N11 DLFLGP MW
Nom 3" Square Infinium recessed downlight

Test Number

SP-00778_2_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	700
Efficacy	68.65 lm/W

Luminous Dimensions

0° - 180° Size	0.16
90° - 270° Size	0.16
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.65
Two luminaires, plane 90°	0.65
Four luminaires	0.69

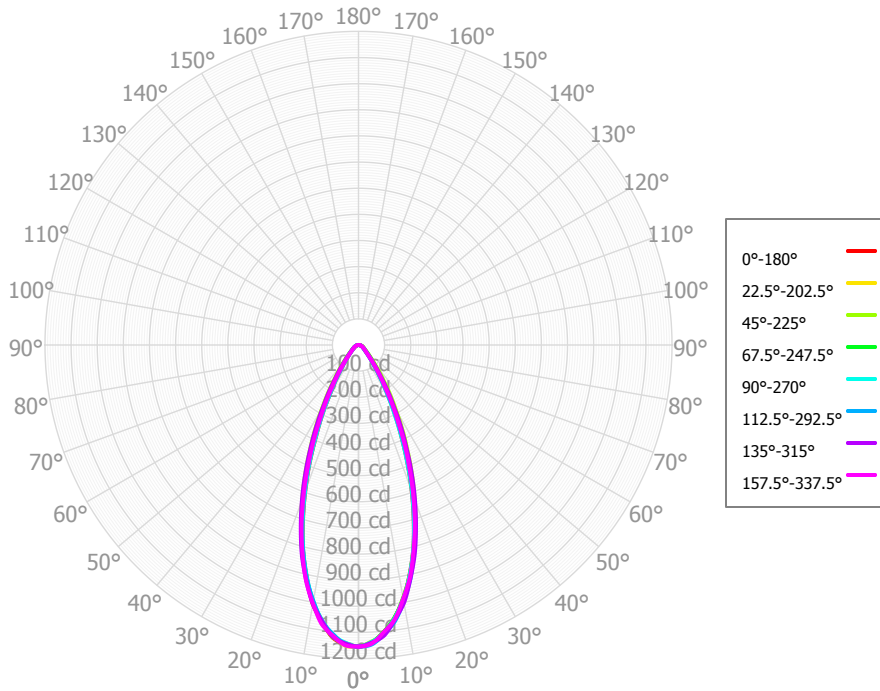
Full Beam Angle

0° - 180°	41°
90° - 270°	41°

IES File Header Contents

Keyword	Value
TEST	SP-00778_2_M-015L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	4/4/2019
LUMCAT	IF03SSx IC 835 015 N11 DLFLGP MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 41 degrees
OTHER	Flood optic, Solite 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, +2W for thermal protection
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°	103.77	14.82%	90.00° - 100.00°	0.06	0.01%
10.00° - 20.00°	224.08	32.00%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	187.93	26.84%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	92.12	13.16%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	41.07	5.87%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	23.77	3.40%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	16.34	2.33%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	9.18	1.31%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.86	0.27%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	700.12	99.99%	0.00° - 180.00°	700.18	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°	1,154.40	1,154.40	1,154.40	1,154.40	1,154.40	1,154.40	1,154.40	1,154.40	1,154.40	1,154.40	1,154.40	1,154.40	1,154.40	1,154.40	1,154.40	1,154.40	1,154.40
2.50°	1,139.62	1,143.78	1,136.47	1,139.74	1,138.55	1,147.52	1,143.54	1,150.56	1,145.63	1,151.75	1,142.17	1,146.29	1,140.82	1,147.55	1,140.54	1,144.70	1,139.62
5.00°	1,112.42	1,103.23	1,113.24	1,103.17	1,109.54	1,111.65	1,121.94	1,117.51	1,125.10	1,114.87	1,123.39	1,114.57	1,116.56	1,111.82	1,117.01	1,104.00	1,112.42
7.50°	1,053.52	1,057.47	1,053.42	1,054.18	1,055.77	1,067.96	1,066.47	1,077.97	1,067.10	1,074.23	1,064.94	1,070.52	1,064.02	1,066.72	1,060.81	1,059.80	1,053.52
10.00°	990.23	983.45	992.61	984.16	988.98	995.13	1,006.51	1,004.57	1,007.02	998.57	1,003.90	999.37	998.31	995.98	1,002.47	985.84	990.23
12.50°	902.19	905.66	907.79	905.39	903.96	916.37	922.93	926.30	913.09	920.78	918.10	918.06	911.98	917.34	916.96	909.91	902.19
15.00°	810.59	811.60	822.10	813.66	809.81	819.25	835.91	827.12	818.14	819.29	830.48	821.46	817.24	820.21	830.65	813.50	810.59
17.50°	703.42	715.11	724.84	716.78	704.58	719.29	734.43	725.42	707.40	717.22	730.26	720.00	709.88	719.73	731.28	716.47	703.42
20.00°	596.56	609.97	627.90	613.33	597.68	612.57	632.85	614.98	596.81	610.49	630.26	614.46	598.21	612.49	631.89	612.71	596.56
22.50°	490.83	507.75	533.61	513.12	488.99	505.07	530.97	507.44	489.25	504.26	531.37	507.86	491.13	507.76	531.89	509.27	490.83
25.00°	390.86	414.07	441.18	416.58	389.86	408.93	432.93	408.18	383.51	409.78	435.55	413.21	385.35	407.38	433.04	414.36	390.86
27.50°	308.23	326.76	360.32	330.75	299.73	313.64	345.90	316.61	300.40	317.37	352.48	321.06	300.57	316.78	348.79	321.22	308.23
30.00°	233.36	255.61	283.12	255.56	227.99	244.46	265.97	244.14	220.86	249.77	274.46	250.33	220.75	240.93	266.98	250.76	233.36
32.50°	177.96	192.93	223.81	194.93	171.27	176.22	203.67	180.79	170.28	185.06	213.76	183.15	169.06	178.52	206.11	183.43	177.96
35.00°	130.93	148.40	168.95	146.86	129.19	138.30	149.80	136.56	123.24	144.10	159.65	141.96	122.55	133.92	148.67	142.16	130.93
37.50°	101.67	111.07	131.70	111.57	97.62	100.98	113.68	100.18	97.06	105.75	124.55	103.88	96.25	99.34	113.03	103.44	101.67
40.00°	77.19	86.92	98.47	86.10	75.37	80.53	83.90	77.88	73.06	83.42	93.98	83.09	72.72	76.29	80.64	81.01	77.19
42.50°	61.66	67.16	78.21	68.26	58.98	60.74	65.51	59.56	59.46	63.18	74.36	63.71	58.86	59.23	63.96	60.51	61.66
45.00°	48.65	54.50	60.68	55.49	47.61	50.59	50.78	47.57	47.11	52.80	57.78	51.62	45.99	48.25	48.88	49.36	48.65
47.50°	39.67	44.31	50.57	45.75	38.94	40.78	41.88	38.17	39.53	43.05	47.55	39.87	38.60	39.47	40.08	39.64	39.67
50.00°	33.02	37.57	41.63	37.73	33.00	34.30	34.89	32.31	32.49	35.79	38.71	35.02	31.54	32.66	32.55	35.42	33.02
52.50°	29.57	32.06	35.42	32.43	28.34	28.26	30.54	27.58	27.10	29.44	32.39	30.24	27.74	27.89	29.15	31.12	29.57
55.00°	26.57	28.06	30.08	28.52	24.72	25.22	26.69	24.21	22.42	26.00	27.15	26.09	24.03	24.69	25.84	26.54	26.57
57.50°	24.10	25.01	26.49	25.54	21.52	22.37	23.42	21.89	19.66	22.58	23.60	22.07	21.22	22.11	22.77	22.65	24.10
60.00°	21.53	23.00	23.61	22.96	19.10	20.45	20.44	20.70	17.43	19.23	20.77	20.31	18.47	19.94	20.06	20.66	21.53
62.50°	18.85	20.94	21.93	20.56	16.94	18.39	17.78	18.22	16.43	16.34	18.94	18.47	17.12	18.25	18.15	18.74	18.85
65.00°	17.09	18.84	20.07	18.21	15.78	15.73	15.21	14.56	14.84	14.46	16.91	15.87	15.75	16.85	16.06	17.00	17.09
67.50°	16.19	17.09	17.93	16.45	14.90	13.49	12.73	12.48	12.24	12.64	14.67	13.43	14.16	15.07	13.59	15.18	16.19
70.00°	14.51	15.61	15.94	14.85	12.89	12.20	10.83	11.38	10.40	10.88	12.08	11.61	12.44	13.12	11.82	13.24	14.51
72.50°	12.35	13.37	14.12	12.46	10.73	10.73	9.21	9.29	9.17	9.37	9.34	9.70	10.43	11.35	10.88	11.44	12.35
75.00°	9.66	10.84	11.74	10.11	8.70	9.07	8.34	6.96	6.65	7.81	8.14	7.68	8.15	9.29	9.88	9.74	9.66
77.50°	7.06	8.09	9.12	7.94	6.23	5.63	6.53	4.47	4.63	5.30	6.48	5.48	5.81	6.13	8.52	7.28	7.06
80.00°	4.77	5.89	6.20	4.82	3.64	3.65	4.11	3.19	3.16	3.39	4.31	3.56	3.57	4.25	5.94	5.06	4.77
82.50°	2.60	3.54	3.47	2.48	2.13	2.48	2.02	1.87	1.60	2.37	2.09	2.00	1.69	2.59	2.93	2.98	2.60
85.00°	0.97	1.34	1.62	1.15	0.97	1.33	1.08	0.91	0.86	1.19	1.11	0.96	0.92	1.29	1.40	1.13	0.97
87.50°	0.85	0.95	0.81	1.17	0.75	0.99	0.84	0.78	0.76	0.87	0.89	0.82	0.92	0.89	1.09	0.96	0.85
90.00°	0.70	0.76	0.84	1.00	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	1.03	0.78	0.70
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%	30%
	0	834	834	834	834	814	814	814	814	778	778	778	745	745	745	714	714	700
	1	792	772	754	737	775	757	741	726	728	715	703	702	692	682	678	670	663
	2	752	717	687	663	736	705	678	655	682	660	641	661	643	627	641	627	614
	3	714	668	633	604	700	658	626	599	640	612	590	623	600	580	607	588	571
	4	679	626	587	557	666	618	581	553	602	571	547	588	562	540	575	553	534
	5	646	588	547	517	635	581	543	515	569	536	510	557	528	505	546	521	501
	6	616	554	513	483	606	549	510	481	538	504	478	529	498	475	519	493	472
	7	588	524	483	454	579	520	480	453	511	476	450	502	471	448	495	467	445
	8	562	497	456	428	554	493	454	427	486	450	425	479	447	424	472	443	422
	9	538	473	432	405	531	469	431	404	463	428	403	457	425	402	451	422	400
	10	516	450	411	385	509	447	410	384	442	407	383	436	404	382	431	402	381

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	38.2 fc	4.1 ft
6.5 ft	27.3 fc	4.9 ft
7.5 ft	20.5 fc	5.6 ft
8.0 ft	18.0 fc	6.0 ft
10.0 ft	11.5 fc	7.5 ft
12.0 ft	8.0 fc	9.0 ft
14.0 ft	5.9 fc	10.4 ft
16.0 ft	4.5 fc	11.9 ft
20.0 ft	2.9 fc	14.9 ft
24.0 ft	2.0 fc	17.9 ft
28.0 ft	1.5 fc	20.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	485,384	485,384	485,384
45.00°	28,928	36,080	28,307
55.00°	19,474	22,053	18,123
65.00°	17,005	19,969	15,700
75.00°	15,700	19,075	14,127
85.00°	4,703	7,800	4,665

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	17.6	18.7	17.9	19.0	19.3	17.0	18.1	17.4	18.4	18.7
	3H	19.5	20.4	19.8	20.7	21.1	18.7	19.6	19.1	20.0	20.3
	4H	20.1	21.0	20.5	21.4	21.8	19.3	20.2	19.7	20.5	20.9
	6H	20.5	21.3	20.9	21.7	22.1	19.6	20.4	20.0	20.7	21.1
	8H	20.5	21.3	21.0	21.7	22.1	19.6	20.3	20.0	20.7	21.1
	12H	20.5	21.3	21.0	21.6	22.1	19.6	20.3	20.0	20.7	21.1
4H	2H	18.2	19.0	18.6	19.4	19.8	17.5	18.4	17.9	18.8	19.2
	3H	20.2	21.0	20.7	21.4	21.8	19.4	20.1	19.8	20.5	20.9
	4H	21.1	21.7	21.5	22.1	22.6	20.1	20.7	20.5	21.2	21.6
	6H	21.5	22.1	22.0	22.5	23.0	20.4	21.0	20.9	21.4	21.9
	8H	21.6	22.1	22.1	22.6	23.0	20.4	21.0	20.9	21.4	21.9
	12H	21.6	22.0	22.1	22.5	23.0	20.4	20.9	20.9	21.4	21.9
8H	4H	21.3	21.8	21.8	22.3	22.8	20.3	20.8	20.7	21.2	21.7
	6H	21.9	22.3	22.4	22.8	23.3	20.7	21.1	21.2	21.6	22.1
	8H	22.0	22.4	22.6	22.9	23.4	20.7	21.1	21.3	21.6	22.1
	12H	22.1	22.4	22.6	22.9	23.5	20.8	21.1	21.3	21.6	22.1
12H	4H	21.3	21.8	21.8	22.2	22.7	20.2	20.7	20.7	21.2	21.6
	6H	21.9	22.3	22.5	22.8	23.3	20.6	21.0	21.2	21.5	22.0
	8H	22.1	22.4	22.6	22.9	23.5	20.7	21.1	21.3	21.6	22.1

Corrected UGR values based on total output lumens

SHR = 1.0