

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

IF03SMx xx 835 015 DLSPGC MW
Nom 3" Square Infinium recessed downlight

Test Number

SP-00764_M-015L

Test Date

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

Summary of Results

Power

Input Watts	12.2 W
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Lumen Output

Output Lumens	704
Efficacy	57.69 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.4
Two luminaires, plane 90°	0.41
Four luminaires	0.44

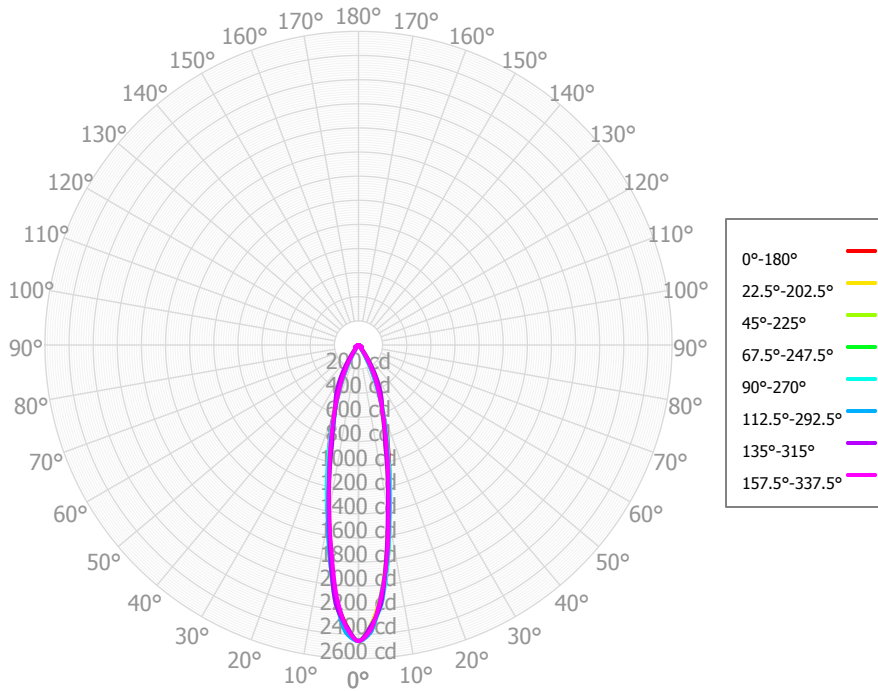
Full Beam Angle

0° - 180°	24°
90° - 270°	25°

IES File Header Contents

Keyword	Value
TEST	SP-00764_M-015L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	2/28/2019
LUMCAT	IF03SMx xx 835 015 DLSPGC MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 24 degrees
OTHER	Spot optic, Clear glass lens
OTHER	Aluminum bezel contains lens
LAMPCAT	N/A
LAMP	N/A, CRI: 80, Philips
OTHER	CCT Multiplier: 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting, scaled from 20L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	180.59	25.66%	90.00° - 100.00°	0.06	0.01%
10.00° - 20.00°	253.77	36.06%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	164.00	23.30%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	48.52	6.89%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	13.00	1.85%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	23.88	3.39%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	14.18	2.01%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	4.11	0.58%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.65	0.23%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	703.70	99.99%	0.00° - 180.00°	703.76	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°	2,454.37	2,454.37	2,454.37	2,454.37	2,454.37	2,454.37	2,454.37	2,454.37	2,454.37	2,454.37	2,454.37	2,454.37	2,454.37	2,454.37	2,454.37	2,454.37	2,454.37
2.50°	2,332.23	2,334.87	2,328.73	2,375.93	2,345.27	2,388.41	2,333.83	2,343.38	2,326.42	2,353.24	2,342.29	2,371.31	2,338.09	2,382.41	2,334.74	2,363.02	2,332.23
5.00°	2,113.02	2,092.26	2,139.17	2,131.80	2,165.99	2,130.24	2,159.03	2,089.11	2,118.20	2,133.31	2,161.02	2,116.56	2,155.81	2,101.29	2,155.38	2,110.67	2,113.02
7.50°	1,783.35	1,778.45	1,768.01	1,837.80	1,830.41	1,807.43	1,776.35	1,718.84	1,744.23	1,757.90	1,793.78	1,769.88	1,797.04	1,800.54	1,767.58	1,800.87	1,783.35
10.00°	1,423.50	1,425.24	1,414.09	1,474.37	1,477.22	1,468.78	1,395.21	1,405.80	1,418.57	1,425.05	1,405.37	1,454.18	1,464.71	1,459.83	1,396.43	1,436.21	1,423.50
12.50°	1,185.82	1,155.25	1,112.11	1,166.28	1,211.13	1,126.59	1,114.42	1,125.60	1,178.18	1,134.22	1,124.28	1,149.99	1,212.47	1,159.42	1,113.30	1,144.02	1,185.82
15.00°	971.97	922.37	853.03	921.66	949.61	895.94	845.29	908.97	957.13	900.92	849.37	913.42	972.29	925.60	856.83	908.93	971.97
17.50°	779.23	742.36	693.79	733.28	770.47	682.09	698.47	721.82	764.38	714.50	700.58	696.28	760.80	728.67	702.56	727.76	779.23
20.00°	589.15	580.63	566.65	597.40	593.62	564.96	562.78	573.42	589.27	567.99	556.40	556.84	572.69	581.67	570.88	580.96	589.15
22.50°	454.34	461.75	500.50	480.28	454.83	456.59	498.49	439.02	435.11	447.84	492.62	433.51	429.21	453.25	505.34	464.84	454.34
25.00°	323.54	354.21	429.19	377.82	319.65	361.93	430.60	335.57	307.82	346.09	426.69	332.22	300.62	345.28	433.15	364.63	323.54
27.50°	228.15	265.73	350.02	279.45	218.10	267.91	346.94	240.91	206.49	254.25	339.65	234.05	194.83	245.44	345.87	276.16	228.15
30.00°	134.97	180.91	270.26	183.68	124.11	182.43	264.12	163.37	128.92	175.82	254.07	153.93	113.69	153.00	260.20	192.56	134.97
32.50°	86.09	117.28	189.75	113.45	76.17	99.94	184.07	89.32	70.57	103.19	177.53	75.30	63.56	89.28	177.47	124.77	86.09
35.00°	40.22	56.26	122.45	56.13	35.86	61.32	113.96	56.28	40.41	62.32	107.80	50.54	34.14	47.05	108.57	62.04	40.22
37.50°	29.27	36.77	68.80	31.35	27.52	26.40	69.18	28.74	28.73	32.08	66.80	27.57	26.20	26.83	60.26	38.11	29.27
40.00°	19.38	20.22	37.54	19.98	20.02	20.91	35.76	21.73	21.18	21.83	33.71	22.28	20.58	19.92	29.93	23.57	19.38
42.50°	16.43	16.99	25.11	15.54	15.15	15.95	25.09	16.35	15.81	16.66	25.73	17.22	16.93	15.69	21.28	18.41	16.43
45.00°	13.78	14.08	19.02	13.29	11.53	13.63	18.15	15.04	12.89	14.59	19.51	15.18	14.11	12.77	16.51	14.86	13.78
47.50°	12.44	14.56	17.26	14.44	11.04	12.78	17.28	13.98	11.02	13.09	17.64	13.81	11.89	13.09	15.60	13.79	12.44
50.00°	13.03	15.60	20.52	16.37	13.04	17.44	20.25	18.59	14.69	17.25	19.30	17.15	14.42	14.68	18.14	12.98	13.03
52.50°	20.22	22.99	26.61	21.59	19.87	22.79	28.34	23.36	20.20	22.07	27.87	21.21	19.64	21.14	23.53	20.83	20.22
55.00°	26.35	29.39	29.57	27.36	25.65	30.13	33.11	30.08	26.72	28.43	33.59	28.76	25.17	29.04	28.60	29.12	26.35
57.50°	29.72	29.25	31.14	27.36	29.81	33.30	34.28	35.07	33.49	34.88	34.79	33.27	30.84	29.49	33.46	30.74	29.72
60.00°	29.71	27.56	25.49	26.77	28.70	27.18	29.48	27.84	28.62	28.46	31.18	26.83	28.01	28.28	29.22	31.80	29.71
62.50°	22.68	18.93	17.32	19.03	20.74	20.38	19.34	20.44	21.64	21.85	21.31	20.24	22.16	20.79	20.03	22.66	22.68
65.00°	15.95	11.56	11.52	11.05	14.12	12.36	11.92	12.20	14.24	13.44	13.22	13.24	15.20	12.33	12.93	13.98	15.95
67.50°	9.69	8.24	6.37	8.25	8.90	6.83	6.41	5.95	7.05	6.18	6.94	7.92	7.96	7.69	6.74	9.00	9.69
70.00°	5.92	5.99	4.62	5.70	5.88	4.27	4.15	4.61	5.38	5.02	4.03	5.42	5.72	3.73	4.35	5.03	5.92
72.50°	4.59	5.50	3.51	4.40	4.31	3.73	3.12	3.94	4.34	3.96	2.83	4.10	4.18	3.61	2.98	4.05	4.59
75.00°	4.53	4.60	3.63	3.86	4.77	3.91	3.48	3.76	4.51	3.01	2.54	3.44	3.74	3.39	3.24	4.18	4.53
77.50°	4.83	3.79	3.64	4.07	4.82	3.42	3.43	3.66	3.78	3.13	2.50	2.76	3.95	3.06	3.47	4.98	4.83
80.00°	5.23	4.02	3.40	3.26	3.52	3.11	2.99	2.96	3.25	3.23	2.44	2.26	3.32	2.41	3.46	3.96	5.23
82.50°	3.73	2.53	2.51	2.01	2.20	2.54	2.13	2.02	2.34	2.40	1.72	1.76	1.59	1.66	2.08	2.56	3.73
85.00°	1.49	1.01	0.89	0.97	1.12	1.49	1.11	1.17	1.04	0.86	1.20	0.97	0.90	1.00	1.38	1.31	1.49
87.50°	0.86	0.98	0.60	0.78	0.97	1.04	0.68	0.80	1.23	0.59	0.82	0.61	0.83	0.69	1.07	0.83	0.86
90.00°	1.14	0.80	0.78	0.67	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.95	0.92	1.14
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%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	838	838	838	838	818	818	818	818	782	782	782	749	749	749	718	718	718	704
	1	802	784	768	753	785	769	754	741	741	729	719	715	706	697	691	684	677	670
	2	768	737	711	689	753	725	701	682	702	683	667	682	666	653	662	650	639	637
	3	736	695	664	640	722	686	657	634	668	644	624	651	631	615	636	619	605	608
	4	706	659	625	599	694	652	620	596	637	610	589	623	601	582	611	592	576	581
	5	678	628	592	566	668	621	588	563	609	581	559	598	573	554	588	566	549	556
	6	653	599	563	538	643	594	560	536	584	554	532	575	549	529	566	543	525	534
	7	629	574	538	513	621	570	536	512	561	531	509	553	526	506	546	522	504	514
	8	607	551	515	491	600	547	514	490	540	510	488	534	506	486	527	503	484	495
	9	587	530	495	472	580	527	494	471	521	491	469	515	488	468	510	485	467	478
	10	568	511	477	454	561	508	476	454	503	473	452	498	471	451	493	468	450	462

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	81.1 fc	2.4 ft
6.5 ft	58.1 fc	2.8 ft
7.5 ft	43.6 fc	3.2 ft
8.0 ft	38.3 fc	3.5 ft
10.0 ft	24.5 fc	4.3 ft
12.0 ft	17.0 fc	5.2 ft
14.0 ft	12.5 fc	6.1 ft
16.0 ft	9.6 fc	6.9 ft
20.0 ft	6.1 fc	8.7 ft
24.0 ft	4.3 fc	10.4 ft
28.0 ft	3.1 fc	12.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1,031,978	1,031,978	1,031,978
45.00°	8,194	11,311	6,859
55.00°	19,320	21,680	18,806
65.00°	15,865	11,464	14,048
75.00°	7,358	5,894	7,742
85.00°	7,184	4,305	5,399

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	19.3	20.3	19.6	20.6	20.9	19.8	20.8	20.2	21.1	21.4
	3H	19.5	20.4	19.9	20.7	21.1	19.9	20.8	20.3	21.1	21.5
	4H	19.5	20.3	19.9	20.7	21.1	19.9	20.7	20.3	21.1	21.5
	6H	19.7	20.5	20.2	20.9	21.3	20.0	20.7	20.4	21.1	21.5
	8H	19.9	20.6	20.3	21.0	21.4	20.0	20.7	20.4	21.1	21.5
	12H	19.9	20.6	20.3	21.0	21.4	19.9	20.6	20.4	21.0	21.4
4H	2H	19.2	20.1	19.7	20.4	20.8	19.8	20.6	20.2	20.9	21.3
	3H	19.5	20.2	19.9	20.6	21.0	19.9	20.5	20.3	20.9	21.4
	4H	19.6	20.2	20.1	20.6	21.1	19.9	20.5	20.3	20.9	21.4
	6H	20.0	20.5	20.5	20.9	21.4	20.1	20.6	20.5	21.0	21.5
	8H	20.2	20.6	20.6	21.1	21.6	20.1	20.6	20.6	21.0	21.5
	12H	20.2	20.6	20.7	21.1	21.6	20.1	20.5	20.6	21.0	21.5
8H	4H	19.5	20.0	20.0	20.5	20.9	19.8	20.3	20.3	20.7	21.2
	6H	20.0	20.4	20.5	20.9	21.4	20.0	20.4	20.5	20.9	21.4
	8H	20.3	20.6	20.8	21.1	21.6	20.1	20.4	20.6	20.9	21.4
	12H	20.4	20.7	20.9	21.2	21.8	20.1	20.4	20.6	20.9	21.5
12H	4H	19.5	19.9	20.0	20.4	20.9	19.8	20.2	20.2	20.7	21.1
	6H	20.0	20.3	20.5	20.8	21.4	20.0	20.3	20.5	20.8	21.3
	8H	20.3	20.6	20.8	21.1	21.7	20.1	20.4	20.6	20.9	21.4

Corrected UGR values based on total output lumens

SHR = 1.0