

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03SMx xx 835 010 DLSPGC MW
Nom 3" Square Infinium recessed downlight

Test Number

SP-00764_M-010L

Test Date

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

Summary of Results

Power

Input Watts	9.3 W
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Lumen Output

Output Lumens	505
Efficacy	54.33 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

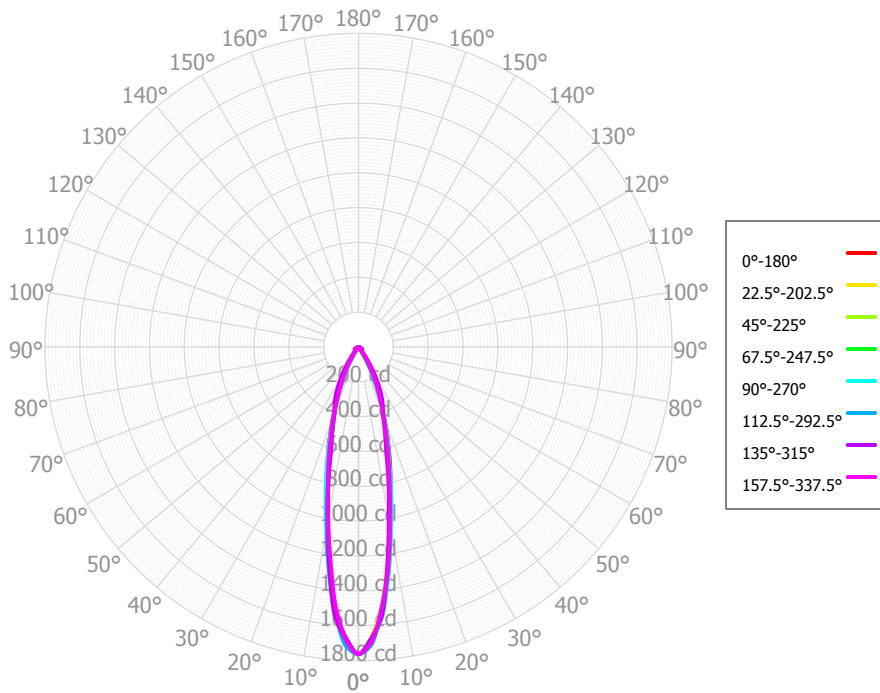
Full Beam Angle

0° - 180°	24°
90° - 270°	25°

IES File Header Contents

Keyword	Value
TEST	SP-00764_M-010L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	2/28/2019
LUMCAT	IF03SMx xx 835 010 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°	129.65	25.66%	90.00° - 100.00°	0.04	0.01%
10.00° - 20.00°	182.20	36.06%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	117.75	23.30%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	34.83	6.89%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	9.33	1.85%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	17.15	3.39%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	10.18	2.01%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	2.95	0.58%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.18	0.23%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	505.22	99.99%	0.00° - 180.00°	505.26	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°	1,762.11	1,762.11	1,762.11	1,762.11	1,762.11	1,762.11	1,762.11	1,762.11	1,762.11	1,762.11	1,762.11	1,762.11	1,762.11	1,762.11	1,762.11	1,762.11	1,762.11
2.50°	1,674.42	1,676.32	1,671.91	1,705.80	1,683.78	1,714.75	1,675.57	1,682.43	1,670.25	1,689.51	1,681.65	1,702.48	1,678.63	1,710.45	1,676.22	1,696.52	1,674.42
5.00°	1,517.04	1,502.13	1,535.82	1,530.52	1,555.07	1,529.40	1,550.07	1,499.88	1,520.76	1,531.61	1,551.50	1,519.58	1,547.76	1,508.62	1,547.45	1,515.35	1,517.04
7.50°	1,280.35	1,276.84	1,269.34	1,319.45	1,314.14	1,297.64	1,275.33	1,234.04	1,252.27	1,262.08	1,287.84	1,270.68	1,290.18	1,292.70	1,269.03	1,292.93	1,280.35
10.00°	1,022.00	1,023.25	1,015.25	1,058.52	1,060.57	1,054.51	1,001.69	1,009.29	1,018.46	1,023.11	1,008.98	1,044.02	1,051.58	1,048.08	1,002.56	1,031.12	1,022.00
12.50°	851.35	829.41	798.44	837.33	869.53	808.84	800.10	808.12	845.87	814.31	807.18	825.64	870.49	832.41	799.29	821.35	851.35
15.00°	697.82	662.22	612.43	661.71	681.77	643.24	606.87	652.60	687.17	646.82	609.80	655.79	698.06	664.53	615.16	652.56	697.82
17.50°	559.45	532.97	498.11	526.46	553.16	489.71	501.47	518.23	548.79	512.97	502.98	499.89	546.21	523.15	504.40	522.49	559.45
20.00°	422.98	416.87	406.82	428.90	426.19	405.61	404.05	411.69	423.07	407.79	399.46	399.78	411.16	417.61	409.87	417.10	422.98
22.50°	326.19	331.51	359.33	344.82	326.54	327.81	357.89	315.20	312.39	321.52	353.68	311.24	308.15	325.41	362.81	333.73	326.19
25.00°	232.28	254.31	308.14	271.25	229.50	259.85	309.15	240.93	221.00	248.48	306.34	238.52	215.83	247.89	310.98	261.78	232.28
27.50°	163.80	190.78	251.30	200.63	156.58	192.34	249.08	172.96	148.25	182.54	243.85	168.03	139.88	176.21	248.31	198.27	163.80
30.00°	96.90	129.88	194.03	131.88	89.11	130.97	189.63	117.29	92.56	126.23	182.41	110.51	81.62	109.85	186.81	138.25	96.90
32.50°	61.81	84.20	136.23	81.45	54.69	71.75	132.15	64.13	50.67	74.08	127.46	54.06	45.63	64.10	127.41	89.58	61.81
35.00°	28.87	40.39	87.92	40.30	25.74	44.02	81.82	40.40	29.02	44.74	77.39	36.28	24.51	33.78	77.95	44.54	28.87
37.50°	21.02	26.40	49.39	22.51	19.76	18.95	49.67	20.64	20.63	23.03	47.96	19.79	18.81	19.26	43.27	27.36	21.02
40.00°	13.91	14.51	26.95	14.34	14.38	15.01	25.68	15.60	15.21	15.67	24.20	15.99	14.78	14.30	21.49	16.92	13.91
42.50°	11.80	12.19	18.03	11.15	10.87	11.45	18.01	11.74	11.35	11.96	18.47	12.36	12.15	11.26	15.28	13.21	11.80
45.00°	9.89	10.11	13.66	9.54	8.28	9.79	13.03	10.80	9.25	10.48	14.00	10.90	10.13	9.17	11.85	10.67	9.89
47.50°	8.93	10.45	12.40	10.36	7.93	9.18	12.40	10.04	7.91	9.40	12.66	9.91	8.54	9.40	11.20	9.90	8.93
50.00°	9.35	11.20	14.73	11.76	9.36	12.52	14.54	13.35	10.55	12.39	13.86	12.31	10.35	10.54	13.02	9.32	9.35
52.50°	14.52	16.51	19.10	15.50	14.27	16.36	20.34	16.77	14.50	15.85	20.01	15.23	14.10	15.18	16.89	14.96	14.52
55.00°	18.92	21.10	21.23	19.64	18.42	21.63	23.77	21.60	19.18	20.41	24.12	20.65	18.07	20.85	20.53	20.91	18.92
57.50°	21.34	21.00	22.36	19.64	21.40	23.91	24.61	25.18	24.04	25.04	24.98	23.89	22.14	21.17	24.02	22.07	21.34
60.00°	21.33	19.79	18.30	19.22	20.60	19.52	21.16	19.99	20.54	20.43	22.39	19.26	20.11	20.30	20.98	22.83	21.33
62.50°	16.28	13.59	12.43	13.67	14.89	14.63	13.88	14.67	15.54	15.69	15.30	14.53	15.91	14.93	14.38	16.27	16.28
65.00°	11.45	8.30	8.27	7.94	10.14	8.88	8.56	8.76	10.23	9.65	9.49	9.50	10.91	8.85	9.29	10.03	11.45
67.50°	6.96	5.91	4.57	5.92	6.39	4.91	4.60	4.27	5.06	4.44	4.98	5.69	5.71	5.52	4.84	6.46	6.96
70.00°	4.25	4.30	3.32	4.09	4.22	3.07	2.98	3.31	3.86	3.60	2.89	3.89	4.10	2.68	3.12	3.61	4.25
72.50°	3.30	3.95	2.52	3.16	3.09	2.68	2.24	2.83	3.12	2.84	2.03	2.94	3.00	2.59	2.14	2.91	3.30
75.00°	3.25	3.30	2.60	2.77	3.42	2.81	2.50	2.70	3.24	2.16	1.82	2.47	2.69	2.44	2.32	3.00	3.25
77.50°	3.47	2.72	2.61	2.92	3.46	2.45	2.46	2.63	2.71	2.25	1.79	1.98	2.83	2.20	2.49	3.57	3.47
80.00°	3.75	2.89	2.44	2.34	2.53	2.23	2.14	2.12	2.33	2.32	1.75	1.62	2.38	1.73	2.49	2.85	3.75
82.50°	2.67	1.82	1.80	1.44	1.58	1.83	1.53	1.45	1.68	1.72	1.23	1.26	1.14	1.19	1.50	1.84	2.67
85.00°	1.07	0.73	0.64	0.69	0.80	1.07	0.80	0.84	0.75	0.62	0.86	0.69	0.65	0.72	0.99	0.94	1.07
87.50°	0.62	0.70	0.43	0.56	0.70	0.74	0.49	0.57	0.88	0.42	0.59	0.44	0.59	0.50	0.77	0.60	0.62
90.00°	0.82	0.57	0.56	0.48	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.68	0.66	0.82
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	601	601	601	601	587	587	587	587	561	561	561	537	537	537	516	516	505
	1	576	563	551	541	564	552	542	532	532	523	516	513	507	501	496	491	486
	2	551	529	510	495	540	520	504	489	504	491	479	489	478	469	476	467	459
	3	528	499	477	459	518	492	472	455	479	462	448	468	453	441	456	445	435
	4	507	473	449	430	498	468	445	428	457	438	423	448	431	418	439	425	413
	5	487	451	425	406	479	446	422	405	437	417	401	429	412	398	422	407	394
	6	469	430	404	386	462	427	402	385	419	398	382	413	394	380	406	390	377
	7	452	412	386	368	446	409	385	367	403	381	365	397	378	364	392	375	362
	8	436	396	370	353	431	393	369	352	388	366	351	383	363	349	379	361	348
	9	421	380	356	339	416	378	354	338	374	352	337	370	350	336	366	348	335
	10	408	367	342	326	403	365	341	326	361	340	325	358	338	324	354	336	323

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	58.3 fc	2.4 ft
6.5 ft	41.7 fc	2.8 ft
7.5 ft	31.3 fc	3.2 ft
8.0 ft	27.5 fc	3.5 ft
10.0 ft	17.6 fc	4.3 ft
12.0 ft	12.2 fc	5.2 ft
14.0 ft	9.0 fc	6.1 ft
16.0 ft	6.9 fc	6.9 ft
20.0 ft	4.4 fc	8.7 ft
24.0 ft	3.1 fc	10.4 ft
28.0 ft	2.2 fc	12.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	740,907	740,907	740,907
45.00°	5,883	8,121	4,924
55.00°	13,870	15,565	13,502
65.00°	11,390	8,230	10,086
75.00°	5,283	4,232	5,558
85.00°	5,158	3,091	3,877

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	18.1	19.1	18.5	19.4	19.7	18.6	19.6	19.0	20.0	20.3
	3H	18.3	19.2	18.7	19.5	19.9	18.7	19.6	19.1	19.9	20.3
	4H	18.4	19.2	18.8	19.5	19.9	18.7	19.6	19.1	19.9	20.3
	6H	18.6	19.3	19.0	19.7	20.1	18.8	19.6	19.2	19.9	20.3
	8H	18.7	19.4	19.2	19.8	20.2	18.8	19.5	19.2	19.9	20.3
	12H	18.8	19.4	19.2	19.8	20.2	18.8	19.5	19.2	19.8	20.3
4H	2H	18.1	18.9	18.5	19.3	19.7	18.6	19.4	19.0	19.8	20.2
	3H	18.3	19.0	18.8	19.4	19.8	18.7	19.4	19.1	19.8	20.2
	4H	18.5	19.1	18.9	19.5	19.9	18.8	19.4	19.2	19.8	20.2
	6H	18.8	19.3	19.3	19.8	20.3	18.9	19.4	19.4	19.9	20.3
	8H	19.0	19.5	19.5	19.9	20.4	18.9	19.4	19.4	19.9	20.3
	12H	19.1	19.5	19.6	20.0	20.5	18.9	19.3	19.4	19.8	20.3
8H	4H	18.4	18.9	18.9	19.3	19.8	18.6	19.1	19.1	19.6	20.1
	6H	18.9	19.3	19.4	19.8	20.2	18.8	19.2	19.4	19.7	20.2
	8H	19.1	19.5	19.7	20.0	20.5	18.9	19.3	19.5	19.8	20.3
	12H	19.2	19.5	19.8	20.0	20.6	19.0	19.3	19.5	19.8	20.3
12H	4H	18.4	18.8	18.8	19.3	19.7	18.6	19.0	19.1	19.5	20.0
	6H	18.9	19.2	19.4	19.7	20.2	18.8	19.2	19.4	19.6	20.2
	8H	19.1	19.4	19.7	19.9	20.5	18.9	19.2	19.5	19.7	20.3

Corrected UGR values based on total output lumens

SHR = 1.0