

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 835 007 DLSPGN MW
Nom 3" Square Infinium recessed downlight

Test Number

SP-00764_1_M-007

Test Date

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

Summary of Results

Power

Input Watts	7.4 W
-------------	-------

Lumen Output

Output Lumens	379
Efficacy	51.26 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.39
Two luminaires, plane 90°	0.41
Four luminaires	0.43

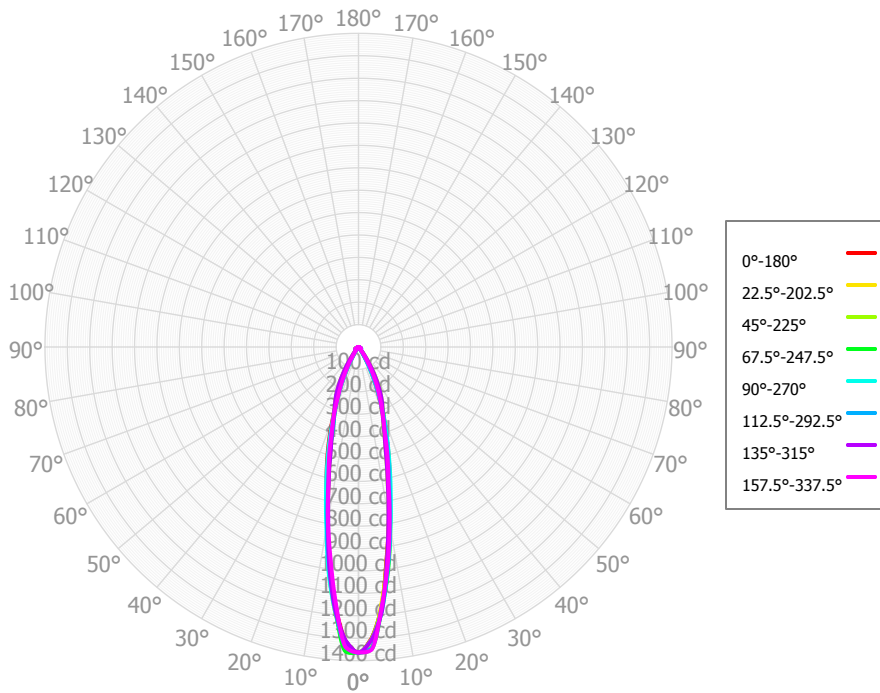
Full Beam Angle

0° - 180°	24°
90° - 270°	24°

IES File Header Contents

Keyword	Value
TEST	SP-00764_1_M-007
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	2/28/2019
LUMCAT	IF03SMx xx 835 007 DLSPGN MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 24 degrees
OTHER	Spot optic, Open aperture / no lens
OTHER	Aluminum bezel
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°	100.37	26.46%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	139.74	36.84%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	88.77	23.40%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	23.91	6.30%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	4.47	1.18%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	9.71	2.56%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	8.63	2.28%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	2.61	0.69%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.06	0.28%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	379.27	99.99%	0.00° - 180.00°	379.31	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°	1,364.13	1,364.13	1,364.13	1,364.13	1,364.13	1,364.13	1,364.13	1,364.13	1,364.13	1,364.13	1,364.13	1,364.13	1,364.13	1,364.13	1,364.13	1,364.13	1,364.13
2.50°	1,304.91	1,337.44	1,307.91	1,349.84	1,311.10	1,338.69	1,312.77	1,340.74	1,314.69	1,346.42	1,327.48	1,359.71	1,322.45	1,346.15	1,310.64	1,352.23	1,304.91
5.00°	1,172.03	1,158.68	1,172.34	1,180.21	1,187.69	1,178.50	1,183.10	1,153.17	1,170.32	1,170.59	1,191.12	1,176.41	1,188.42	1,174.94	1,188.37	1,172.38	1,172.03
7.50°	957.95	979.29	966.29	1,009.14	994.02	995.34	993.92	955.59	994.50	973.73	1,009.28	993.13	1,018.47	999.93	969.55	991.11	957.95
10.00°	782.48	797.02	774.65	816.89	819.30	808.58	778.34	785.72	798.46	794.26	790.74	810.23	823.77	810.21	770.37	799.30	782.48
12.50°	647.47	627.67	595.11	631.57	663.15	621.39	618.01	616.98	656.42	616.34	619.53	631.10	668.97	635.45	600.13	617.98	647.47
15.00°	524.84	507.17	465.55	513.28	531.94	496.31	478.52	506.93	544.91	501.47	482.13	504.29	538.39	508.53	465.44	497.04	524.84
17.50°	413.55	397.06	372.57	401.08	422.10	376.46	390.33	398.08	436.41	389.81	388.12	382.69	424.48	395.27	377.00	385.51	413.55
20.00°	318.89	319.31	313.89	330.66	326.25	311.58	318.69	316.45	329.38	315.16	321.06	309.62	319.32	319.28	313.11	316.31	318.89
22.50°	237.73	248.03	277.38	261.84	241.02	249.23	273.76	236.76	244.06	241.50	272.64	238.77	236.65	247.90	277.10	250.65	237.73
25.00°	170.89	193.95	235.51	201.58	169.02	194.72	235.95	180.57	167.93	187.63	234.39	182.68	164.29	187.15	234.86	197.94	170.89
27.50°	114.18	142.22	190.66	143.25	105.77	140.45	188.61	125.83	112.04	134.25	188.35	128.19	107.38	130.24	186.33	146.90	114.18
30.00°	71.05	95.81	143.33	93.10	62.84	93.15	139.17	83.30	63.41	90.58	138.66	82.10	56.51	81.03	138.17	101.01	71.05
32.50°	36.38	56.61	94.80	49.33	31.72	47.31	96.37	44.32	38.54	48.88	95.57	41.77	32.82	42.85	90.31	60.50	36.38
35.00°	19.85	31.66	59.11	28.01	17.78	29.37	54.71	27.13	20.78	30.09	55.17	25.34	18.23	23.78	54.02	33.86	19.85
37.50°	13.11	13.87	28.80	11.33	12.44	12.64	33.43	12.34	14.11	13.09	33.06	12.09	12.73	11.00	26.61	13.87	13.11
40.00°	8.84	8.29	14.97	8.26	8.93	9.12	14.85	9.28	10.21	10.22	17.23	9.62	9.75	7.66	12.26	8.76	8.84
42.50°	5.73	4.80	6.98	5.76	6.19	5.87	9.42	6.59	7.66	7.52	10.24	7.33	7.47	5.37	6.78	5.05	5.73
45.00°	3.98	4.40	4.65	4.68	4.50	4.70	5.18	5.29	5.37	5.78	5.77	5.57	5.35	4.48	4.24	4.03	3.98
47.50°	2.77	4.27	4.02	4.22	3.19	3.98	5.01	4.61	4.60	4.48	4.92	4.54	4.31	4.21	3.43	3.56	2.77
50.00°	3.67	4.50	5.62	5.08	4.73	5.87	5.06	5.94	4.08	5.26	4.93	5.31	3.46	4.68	4.34	4.01	3.67
52.50°	5.30	6.57	7.78	6.99	7.16	8.30	9.89	8.35	7.80	7.07	8.95	7.46	6.42	6.79	6.13	5.74	5.30
55.00°	8.97	10.71	10.66	10.86	10.64	13.18	14.76	13.72	12.00	12.84	13.72	12.55	9.89	10.58	9.47	9.34	8.97
57.50°	13.22	12.70	13.69	13.10	14.38	16.71	15.72	17.08	14.90	16.96	15.21	15.60	12.48	12.83	13.49	11.91	13.22
60.00°	13.13	12.51	12.27	12.69	13.99	15.19	16.48	15.77	17.69	15.83	16.22	14.96	14.98	13.70	12.84	13.17	13.13
62.50°	12.03	10.70	10.15	10.93	12.72	12.96	12.63	13.30	14.48	13.63	12.52	12.78	12.99	12.27	10.39	12.06	12.03
65.00°	9.41	7.45	7.45	7.28	9.25	8.53	8.80	8.52	11.01	8.57	8.32	8.13	10.73	9.03	7.61	8.28	9.41
67.50°	6.50	5.08	4.68	4.70	5.40	4.94	5.13	4.87	7.15	4.73	5.13	4.79	6.96	5.99	4.72	5.37	6.50
70.00°	4.82	3.33	2.95	3.31	4.19	3.01	2.33	2.81	3.81	3.05	2.32	2.91	3.86	3.08	2.80	3.21	4.82
72.50°	3.49	2.75	1.64	2.57	3.25	2.07	1.69	2.09	2.43	2.13	1.42	2.20	3.47	2.43	1.25	2.61	3.49
75.00°	3.46	2.62	1.75	2.20	2.82	1.83	1.67	2.06	2.00	1.72	1.10	1.99	3.27	2.36	1.69	2.69	3.46
77.50°	4.39	3.06	2.28	2.70	3.04	1.87	1.86	1.92	2.25	1.56	1.30	2.04	3.19	2.39	2.12	3.24	4.39
80.00°	5.01	3.23	2.46	2.43	3.09	2.04	1.54	1.78	2.59	1.40	1.54	2.15	3.00	2.42	2.34	3.33	5.01
82.50°	2.17	2.24	1.03	1.62	0.87	1.62	0.98	1.16	1.15	1.02	0.94	1.34	0.94	1.74	1.42	2.37	2.17
85.00°	0.40	0.73	0.66	0.81	0.35	0.76	0.56	0.55	0.58	0.50	0.64	0.45	0.64	0.64	0.88	0.80	0.40
87.50°	0.37	0.43	0.51	0.41	0.41	0.51	0.47	0.66	0.49	0.56	0.53	0.42	0.43	0.49	0.57	0.59	0.37
90.00°	0.56	0.58	0.49	0.35	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.57	0.56
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	452	452	452	452	441	441	441	441	421	421	421	403	403	403	387	387	379
	1	432	423	414	406	423	415	407	400	399	393	388	385	381	376	372	369	361
	2	414	398	384	373	406	391	379	368	379	369	360	368	360	353	358	351	344
	3	397	376	360	346	390	371	356	344	361	349	338	352	342	333	344	335	329
	4	382	357	339	325	375	353	336	323	345	331	320	338	326	316	331	321	315
	5	367	340	322	308	362	337	320	306	331	315	304	325	312	301	319	308	302
	6	354	326	307	293	349	323	305	292	317	302	290	312	299	288	308	296	291
	7	341	312	293	280	337	310	292	279	305	289	278	301	287	276	297	285	280
	8	330	300	281	268	326	298	280	268	294	278	267	291	276	266	287	275	270
	9	319	289	271	258	315	287	270	258	284	268	257	281	267	256	278	265	261
	10	309	279	261	249	306	277	260	249	275	259	248	272	258	247	270	256	253

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	45.1 fc	2.3 ft
6.5 ft	32.3 fc	2.8 ft
7.5 ft	24.3 fc	3.2 ft
8.0 ft	21.3 fc	3.4 ft
10.0 ft	13.6 fc	4.3 ft
12.0 ft	9.5 fc	5.1 ft
14.0 ft	7.0 fc	6.0 ft
16.0 ft	5.3 fc	6.8 ft
20.0 ft	3.4 fc	8.5 ft
24.0 ft	2.4 fc	10.2 ft
28.0 ft	1.7 fc	11.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	573,567	573,567	573,567
45.00°	2,364	2,763	2,674
55.00°	6,577	7,815	7,797
65.00°	9,360	7,415	9,200
75.00°	5,623	2,840	4,586
85.00°	1,913	3,201	1,673

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	15.4	16.4	15.7	16.7	17.0	16.9	17.9	17.3	18.2	18.5
	3H	16.1	17.0	16.5	17.3	17.7	17.2	18.1	17.6	18.5	18.8
	4H	16.4	17.2	16.8	17.5	17.9	17.3	18.1	17.7	18.5	18.9
	6H	17.4	18.1	17.8	18.5	18.9	17.6	18.4	18.0	18.7	19.1
	8H	17.7	18.4	18.1	18.7	19.2	17.7	18.4	18.1	18.7	19.2
	12H	17.7	18.3	18.1	18.7	19.2	17.6	18.3	18.1	18.7	19.1
4H	2H	15.6	16.4	16.0	16.8	17.2	17.1	17.9	17.5	18.3	18.6
	3H	16.4	17.0	16.8	17.4	17.9	17.4	18.1	17.8	18.5	18.9
	4H	16.7	17.3	17.1	17.7	18.2	17.5	18.1	18.0	18.6	19.0
	6H	18.0	18.5	18.4	18.9	19.4	17.9	18.4	18.4	18.9	19.4
	8H	18.4	18.8	18.8	19.3	19.8	18.0	18.5	18.5	18.9	19.4
	12H	18.4	18.8	18.9	19.3	19.8	18.0	18.4	18.5	18.9	19.4
8H	4H	16.7	17.2	17.2	17.6	18.1	17.4	17.9	17.9	18.4	18.8
	6H	18.2	18.5	18.7	19.0	19.5	17.9	18.3	18.4	18.8	19.3
	8H	18.7	19.0	19.2	19.5	20.0	18.1	18.4	18.6	18.9	19.4
	12H	18.8	19.1	19.3	19.6	20.2	18.1	18.4	18.6	18.9	19.5
12H	4H	16.7	17.1	17.2	17.6	18.1	17.4	17.8	17.9	18.3	18.8
	6H	18.2	18.5	18.7	19.0	19.5	17.9	18.2	18.4	18.7	19.2
	8H	18.7	19.0	19.2	19.5	20.1	18.1	18.4	18.6	18.9	19.4

Corrected UGR values based on total output lumens

SHR = 1.0