Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03SSx IC 835 007 N11 DLSPGP MW

Nom 3" Square Infinium recessed downlight

Test Number

SP-00780_2_M-007L

Test Date

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

Summary of Results

Power

Input Watts	5.4 W

Lumen Output

Output Lumens	375
Efficacy	69.36 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.42
Two luminaires, plane 90°	0.44
Four luminaires	0.47

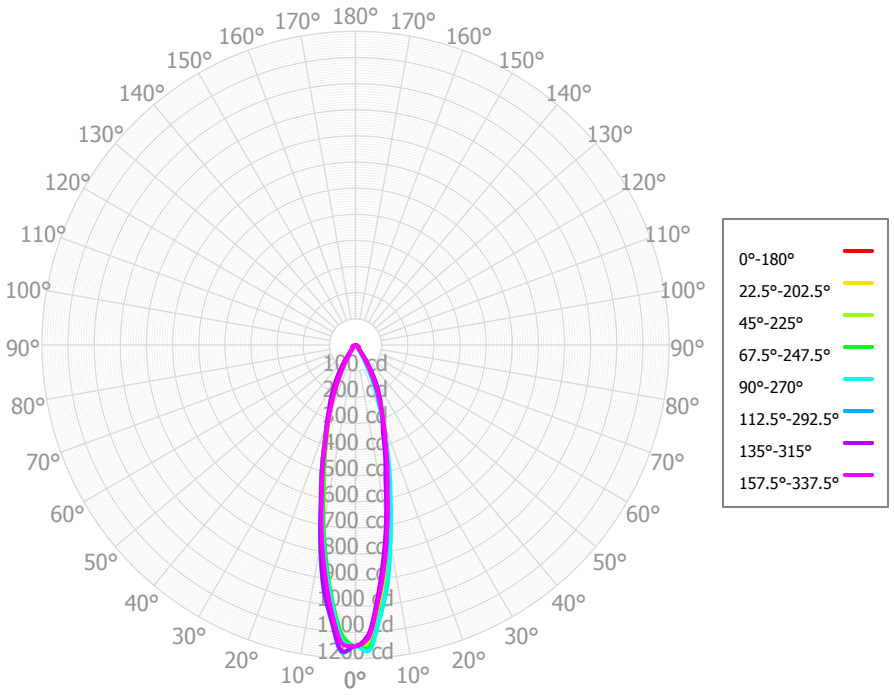
Full Beam Angle

0° - 180°	25°
90° - 270°	26°

IES File Header Contents

Keyword	Value
TEST	SP-00780_2_M-007L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	3/11/2019
LUMCAT	IF03SSx IC 835 007 N11 DLSPGP MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 25 degrees
OTHER	Narrow Flood optic, Solite 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°	88.40	23.60%	90.00° - 100.00°	0.05	0.01%
10.00° - 20.00°	131.45	35.09%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	88.28	23.57%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	30.66	8.19%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	10.25	2.74%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	12.58	3.36%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	8.41	2.25%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	3.69	0.99%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.80	0.21%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	374.52	99.99%	0.00° - 180.00°	374.57	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°	1,152.56	1,152.56	1,152.56	1,152.56	1,152.56	1,152.56	1,152.56	1,152.56	1,152.56	1,152.56	1,152.56	1,152.56	1,152.56	1,152.56	1,152.56	1,152.56	1,152.56
2.50°	1,113.27	1,154.88	1,148.38	1,161.87	1,172.32	1,177.99	1,173.67	1,145.50	1,143.29	1,139.73	1,137.91	1,116.41	1,135.53	1,121.84	1,112.37	1,124.21	1,113.27
5.00°	989.86	1,015.26	1,020.74	1,052.71	1,051.31	1,060.64	1,056.54	1,031.15	1,022.64	997.82	1,004.74	995.28	1,006.39	983.61	969.26	987.89	989.86
7.50°	836.56	874.41	874.69	928.58	926.61	940.91	936.15	887.52	894.80	855.81	868.27	846.92	866.33	840.36	819.62	849.54	836.56
10.00°	705.53	729.17	719.46	763.52	772.11	777.92	770.95	741.78	746.54	707.86	711.01	705.73	729.25	698.31	674.66	703.86	705.53
12.50°	581.76	584.04	562.95	610.74	621.87	617.74	609.32	595.50	608.94	561.00	561.43	566.97	592.48	556.30	529.96	568.71	581.76
15.00°	482.39	485.29	459.30	490.93	506.12	502.42	494.04	483.54	500.47	461.02	457.40	463.58	489.64	456.20	437.70	470.01	482.39
17.50°	390.99	386.72	363.05	383.65	393.93	389.69	383.10	379.93	398.22	361.96	361.25	371.75	390.09	357.41	348.19	378.93	390.99
20.00°	312.71	319.95	309.49	309.40	308.58	318.36	323.04	303.60	312.37	297.10	309.29	303.29	314.47	296.35	302.58	314.27	312.71
22.50°	238.54	253.38	261.50	241.33	226.39	248.27	264.39	233.92	233.37	232.73	259.28	242.33	241.07	236.47	258.93	252.62	238.54
25.00°	178.21	201.64	220.00	188.97	166.48	195.51	221.52	179.47	172.45	184.35	220.20	188.89	181.55	187.01	219.31	200.99	178.21
27.50°	122.05	150.09	179.28	139.71	109.70	143.61	178.80	128.56	117.80	136.37	180.62	137.81	123.27	137.81	179.86	151.64	122.05
30.00°	82.62	109.36	137.85	98.17	74.88	103.22	137.64	91.39	79.13	99.03	138.38	97.89	85.20	99.29	138.70	109.69	82.62
32.50°	48.25	68.99	96.34	62.37	42.96	64.25	97.53	57.26	47.31	62.33	98.28	61.34	48.75	60.95	97.48	71.72	48.25
35.00°	31.01	46.40	66.97	40.68	30.05	43.33	67.58	38.09	32.28	42.33	68.99	40.43	33.51	42.06	69.27	46.43	31.01
37.50°	18.73	24.25	38.97	23.47	18.43	23.62	39.37	22.23	20.16	22.99	42.34	24.15	19.89	23.49	41.44	25.50	18.73
40.00°	13.72	17.64	26.70	16.88	14.78	17.85	27.44	16.16	15.16	17.90	28.99	17.16	15.26	17.71	29.97	17.96	13.72
42.50°	10.73	11.22	16.06	12.02	11.57	12.53	16.53	12.15	11.30	13.01	17.55	12.86	11.28	12.03	18.98	12.01	10.73
45.00°	9.95	10.64	13.86	11.22	11.14	12.19	14.85	11.19	10.17	12.03	15.22	12.32	10.89	11.98	16.28	10.84	9.95
47.50°	9.80	10.14	12.54	11.03	11.00	11.97	13.47	10.84	9.94	11.24	13.66	12.82	10.73	11.93	13.76	10.47	9.80
50.00°	11.50	11.98	13.48	12.24	12.54	12.91	14.65	12.40	11.82	13.88	15.66	14.12	12.60	13.16	14.97	12.48	11.50
52.50°	13.69	13.75	14.63	13.19	13.83	13.80	15.73	14.34	13.48	16.32	17.13	15.64	14.59	14.38	16.22	14.06	13.69
55.00°	14.26	13.86	14.05	13.55	13.69	14.12	16.00	14.99	14.66	15.46	16.22	14.94	14.28	13.87	15.07	14.42	14.26
57.50°	14.39	13.88	13.32	13.27	13.37	14.23	15.94	15.38	14.91	14.49	15.02	13.66	13.85	13.34	13.88	14.12	14.39
60.00°	12.99	11.93	11.48	11.60	11.99	12.45	13.35	13.33	13.09	11.95	12.55	11.66	12.77	11.39	11.49	11.97	12.99
62.50°	11.20	10.00	9.54	9.97	10.56	10.62	10.77	10.83	11.14	9.48	10.10	9.47	11.66	9.45	9.09	9.91	11.20
65.00°	9.27	8.31	7.88	8.45	8.87	8.39	8.24	8.45	8.93	7.97	7.76	8.36	9.67	7.78	7.28	8.10	9.27
67.50°	7.31	6.74	6.27	7.13	7.33	6.43	5.95	6.09	7.03	6.52	5.87	7.51	7.69	6.19	5.57	6.50	7.31
70.00°	6.21	5.81	5.44	6.12	6.26	5.49	4.59	4.94	5.60	5.35	5.16	5.90	6.42	5.20	4.69	5.33	6.21
72.50°	5.20	4.77	4.56	4.87	5.09	4.45	3.65	3.90	4.25	4.35	4.29	4.34	5.11	4.37	3.96	4.35	5.20
75.00°	4.28	3.58	3.57	3.50	3.83	3.27	3.18	3.04	2.97	3.56	3.28	3.24	3.74	3.78	3.52	3.49	4.28
77.50°	3.01	2.48	2.45	2.38	2.55	2.37	2.34	2.13	2.30	2.40	2.25	2.15	2.59	2.86	2.72	2.76	3.01
80.00°	1.83	1.71	1.49	1.54	1.59	1.62	1.71	1.28	1.68	1.51	1.53	1.32	1.56	1.79	1.88	2.03	1.83
82.50°	1.15	1.24	0.92	0.91	0.92	0.98	1.19	0.68	1.00	0.96	0.99	1.03	0.77	0.81	1.12	1.25	1.15
85.00°	0.36	0.70	0.56	0.47	0.50	0.50	0.59	0.58	0.49	0.49	0.46	0.63	0.49	0.49	0.53	0.54	0.36
87.50°	0.40	0.41	0.51	0.40	0.41	0.45	0.41	0.47	0.44	0.38	0.33	0.40	0.51	0.43	0.36	0.39	0.40
90.00°	0.41	0.40	0.45	0.40	0.35	0.36	0.42	0.43	0.32	0.26	0.30	0.31	0.37	0.26	0.32	0.40	0.41
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.

	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	446	446	446	446	436	436	436	436	416	416	416	398	398	398	382	382	382	375
	1	426	416	407	399	417	408	400	393	393	387	381	379	374	369	366	362	359	355
	2	407	390	376	364	399	383	371	360	371	361	352	360	352	344	350	343	337	336
	3	389	367	350	336	382	362	346	333	352	339	328	343	332	323	335	326	318	320
	4	373	347	328	314	366	343	325	312	335	320	308	328	315	305	321	310	301	304
RCR	5	357	329	310	295	352	326	308	294	320	304	291	313	300	289	308	296	286	291
	6	343	314	294	280	338	311	292	279	306	289	277	301	286	275	296	283	273	278
	7	330	300	280	266	326	297	279	265	293	276	264	289	274	263	285	271	261	267
	8	318	287	268	254	314	285	267	254	281	265	253	278	263	252	274	261	251	257
	9	307	276	256	243	303	274	256	243	271	254	242	268	252	242	265	251	241	247
	10	296	265	246	234	293	264	246	234	261	244	233	258	243	232	256	242	232	238

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	38.1 fc	2.5 ft
6.5 ft	27.3 fc	2.9 ft
7.5 ft	20.5 fc	3.4 ft
8.0 ft	18.0 fc	3.6 ft
10.0 ft	11.5 fc	4.5 ft
12.0 ft	8.0 fc	5.4 ft
14.0 ft	5.9 fc	6.4 ft
16.0 ft	4.5 fc	7.3 ft
20.0 ft	2.9 fc	9.1 ft
24.0 ft	2.0 fc	10.9 ft
28.0 ft	1.5 fc	12.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	484,610	484,610	484,610
45.00°	5,919	8,243	6,625
55.00°	10,450	10,301	10,038
65.00°	9,220	7,845	8,826
75.00°	6,949	5,805	6,218
85.00°	1,757	2,720	2,402

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	16.1	17.1	16.5	17.4	17.8	16.0	17.0	16.4	17.4	17.7
	3H	17.1	18.0	17.5	18.4	18.7	17.1	18.0	17.5	18.4	18.7
	4H	17.5	18.4	17.9	18.7	19.1	17.5	18.3	17.9	18.6	19.0
	6H	17.7	18.5	18.1	18.8	19.2	17.6	18.3	18.0	18.7	19.1
	8H	17.7	18.4	18.2	18.8	19.2	17.6	18.3	18.0	18.7	19.1
	12H	17.7	18.4	18.1	18.8	19.2	17.5	18.2	18.0	18.6	19.0
4H	2H	16.3	17.1	16.7	17.5	17.9	16.3	17.1	16.7	17.5	17.8
	3H	17.5	18.2	17.9	18.6	19.0	17.5	18.2	17.9	18.6	19.0
	4H	17.9	18.6	18.4	19.0	19.4	17.9	18.5	18.3	18.9	19.4
	6H	18.2	18.7	18.7	19.2	19.7	18.1	18.6	18.5	19.0	19.5
	8H	18.3	18.7	18.7	19.2	19.7	18.1	18.6	18.5	19.0	19.5
	12H	18.2	18.7	18.7	19.2	19.6	18.0	18.5	18.5	19.0	19.4
8H	4H	18.0	18.5	18.5	18.9	19.4	17.9	18.4	18.4	18.9	19.3
	6H	18.3	18.7	18.9	19.2	19.7	18.1	18.5	18.6	19.0	19.5
	8H	18.4	18.8	19.0	19.3	19.8	18.2	18.5	18.7	19.0	19.5
	12H	18.5	18.7	19.0	19.2	19.8	18.2	18.5	18.7	19.0	19.6
12H	4H	18.0	18.4	18.5	18.9	19.4	17.9	18.3	18.4	18.8	19.3
	6H	18.3	18.7	18.9	19.1	19.7	18.1	18.5	18.6	18.9	19.5
	8H	18.4	18.7	19.0	19.2	19.8	18.2	18.5	18.7	19.0	19.6

Corrected UGR values based on total output lumens

SHR = 1.0