Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire
IF03RSx IC 835 007 N11 DLFLGP MW

Test Number
SP-00774_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	537
Efficacy	99.36 lm/W

Luminous Dimensions

0° - 180° Size	-0.2
90° - 270° Size	-0.2
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.6
Two luminaires, plane 90°	0.61
Four luminaires	0.64

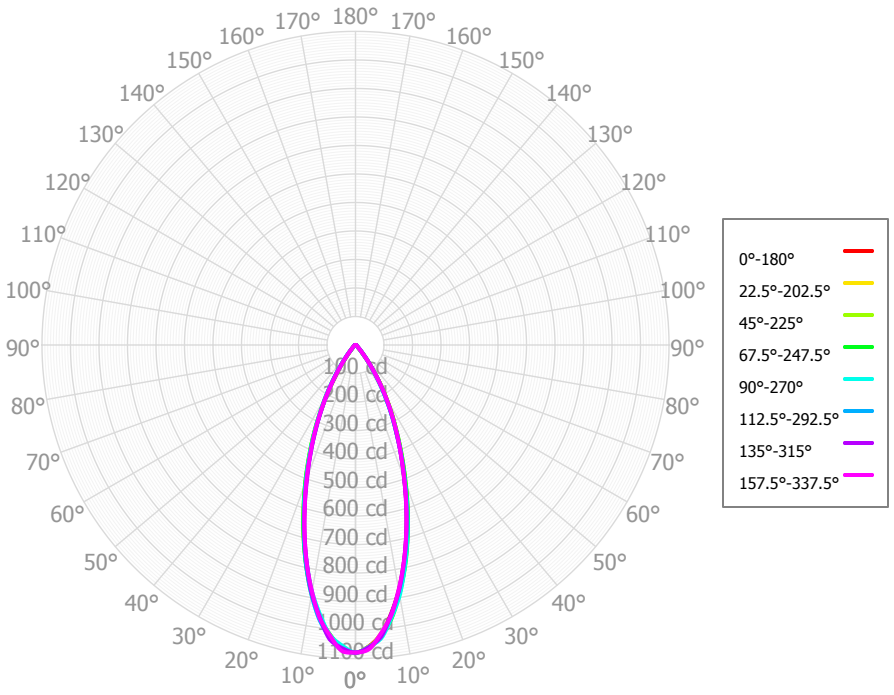
Full Beam Angle

0° - 180°	38°
90° - 270°	38°

IES File Header Contents

Keyword	Value
TEST	SP-00774_2_M-007L
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/8/2019
UPDATE	3/11/2019
LUMCAT	IF03RSx IC 835 007 N11 DLFLGP MW
LUMINIARE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 38 degrees
OTHER	Flood optic, Solite lens
OTHER	Aluminum bezel contains lens
LAMPCAT	N/A
LAMP	N/A, CRI: 80, Philips
OTHER	CCT Multipliers: 40K x 1.03
OTHER	Total luminaire wattages 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°	94.23	17.56%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	190.39	35.48%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	155.99	29.07%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	66.37	12.37%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	14.72	2.74%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	6.64	1.24%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	4.72	0.88%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	2.75	0.51%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.70	0.13%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	536.51	99.99%	0.00° - 180.00°	536.54	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°	1,079.15	1,079.15	1,079.15	1,079.15	1,079.15	1,079.15	1,079.15	1,079.15	1,079.15	1,079.15	1,079.15	1,079.15	1,079.15	1,079.15	1,079.15	1,079.15	1,079.15
2.50°	1,059.02	1,064.55	1,059.49	1,066.02	1,060.66	1,071.52	1,064.99	1,075.03	1,063.45	1,068.70	1,060.46	1,065.78	1,056.13	1,065.52	1,061.51	1,069.05	1,059.02
5.00°	1,020.15	1,017.39	1,028.45	1,023.10	1,033.18	1,030.78	1,036.86	1,023.59	1,028.06	1,024.00	1,029.10	1,020.67	1,023.03	1,019.95	1,028.17	1,016.83	1,020.15
7.50°	952.85	958.42	960.33	968.07	965.30	971.60	961.55	965.97	960.73	966.83	961.91	965.04	953.60	957.86	953.89	957.67	952.85
10.00°	874.52	876.98	886.92	886.63	892.60	889.63	884.79	878.21	882.49	884.28	888.11	883.40	878.66	875.92	876.33	871.54	874.52
12.50°	783.68	790.38	795.87	800.30	798.32	797.57	787.61	788.60	789.57	795.47	796.59	796.52	787.46	787.15	781.98	782.95	783.68
15.00°	689.13	695.69	703.43	705.34	702.78	698.36	690.33	689.77	694.08	697.89	703.43	701.84	695.13	691.71	687.21	687.24	689.13
17.50°	594.66	601.41	606.96	610.00	603.17	596.66	591.90	591.22	595.80	598.82	606.70	606.10	600.24	596.65	590.90	592.63	594.66
20.00°	500.21	507.65	510.68	514.11	504.16	503.60	495.49	501.53	504.41	509.48	513.96	515.59	508.56	501.91	498.27	500.55	500.21
22.50°	419.48	422.72	427.45	426.59	420.43	412.85	412.68	413.18	419.34	421.17	428.09	425.47	422.85	417.47	416.01	415.71	419.48
25.00°	340.85	346.91	345.59	348.85	338.13	336.48	332.37	338.49	340.58	343.27	346.47	347.47	343.02	339.89	338.93	344.23	340.85
27.50°	278.00	278.79	281.03	277.88	270.04	262.85	263.63	265.28	266.52	265.94	270.76	270.09	272.01	271.84	273.39	276.60	278.00
30.00°	216.54	217.32	217.50	213.43	203.90	202.29	198.23	201.09	199.79	200.12	201.75	205.58	207.55	208.87	211.61	214.69	216.54
32.50°	160.25	160.89	161.49	156.48	150.13	143.39	144.04	140.62	137.47	135.46	140.51	142.68	151.05	155.06	156.59	158.01	160.25
35.00°	104.48	107.99	108.64	105.41	100.19	101.53	95.88	96.53	91.91	91.93	92.36	98.67	104.09	105.23	108.69	107.79	104.48
37.50°	69.92	69.85	71.35	68.63	66.92	60.84	63.47	58.29	54.64	51.06	56.59	57.66	66.82	71.52	71.05	69.18	69.92
40.00°	36.88	40.05	39.34	41.05	38.55	41.92	37.73	38.97	35.00	35.12	34.13	38.07	41.74	43.25	43.62	42.22	36.88
42.50°	25.54	24.67	26.04	25.13	25.85	23.72	25.81	23.46	22.21	20.84	21.90	21.02	26.74	28.88	28.47	25.51	25.54
45.00°	15.07	15.98	15.37	15.34	15.72	17.51	16.99	17.40	16.46	16.10	15.00	16.04	17.65	18.01	18.34	17.17	15.07
47.50°	11.68	11.63	11.84	10.92	12.10	11.70	13.33	12.79	12.79	12.00	11.51	11.77	12.53	13.24	13.14	12.14	11.68
50.00°	8.65	8.84	8.90	8.74	9.23	10.26	10.48	11.11	10.60	10.49	9.32	9.97	9.77	9.60	9.85	9.36	8.65
52.50°	7.45	7.72	7.24	7.58	7.83	8.89	8.73	9.57	8.73	9.04	7.80	8.40	8.32	8.29	8.09	7.85	7.45
55.00°	6.39	7.04	6.09	6.75	6.90	7.88	7.47	8.26	8.00	7.79	7.17	7.44	7.23	7.25	7.07	7.04	6.39
57.50°	5.87	6.35	5.85	6.14	6.70	6.92	6.79	7.17	7.45	6.70	6.91	6.44	6.30	6.42	6.56	6.37	5.87
60.00°	5.36	5.66	5.42	5.57	6.24	6.21	6.10	6.39	6.68	5.97	6.02	5.32	5.66	5.60	6.02	5.75	5.36
62.50°	4.89	5.21	4.72	5.28	5.46	5.53	5.42	5.59	5.89	5.30	4.91	4.51	5.12	5.39	5.47	5.48	4.89
65.00°	4.44	4.80	4.30	5.04	4.96	4.92	4.68	4.80	4.75	4.75	4.52	4.21	4.66	5.17	4.91	5.34	4.44
67.50°	4.02	4.28	4.22	4.36	4.77	4.33	3.90	4.07	3.72	4.11	4.29	3.87	4.24	4.63	4.34	4.87	4.02
70.00°	3.65	3.75	3.93	3.64	4.13	3.80	3.29	3.41	3.50	3.36	3.35	3.48	3.90	4.06	4.19	4.32	3.65
72.50°	3.34	3.07	3.49	3.14	3.19	3.21	2.73	2.86	2.99	3.01	2.53	3.14	3.48	3.39	4.12	3.43	3.34
75.00°	2.74	2.59	3.16	2.64	2.55	2.61	2.10	2.33	2.12	2.66	1.99	2.69	2.84	2.88	3.46	2.62	2.74
77.50°	2.01	2.41	2.66	2.15	1.89	2.25	1.49	1.76	1.71	1.90	1.60	1.71	2.26	2.51	2.69	2.01	2.01
80.00°	1.32	1.81	1.63	1.55	1.11	1.38	1.00	1.13	1.19	1.08	1.19	1.12	1.45	1.91	1.78	1.45	1.32
82.50°	0.79	1.08	1.05	0.93	0.56	0.63	0.68	0.71	0.68	0.57	0.71	0.61	0.67	0.99	0.86	0.85	0.79
85.00°	0.51	0.57	0.71	0.57	0.42	0.52	0.47	0.47	0.40	0.45	0.61	0.43	0.51	0.55	0.55	0.47	0.51
87.50°	0.43	0.61	0.52	0.53	0.38	0.44	0.40	0.38	0.47	0.41	0.52	0.50	0.43	0.59	0.51	0.44	0.43
90.00°	0.42	0.49	0.48	0.53	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.41	0.58	0.42
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	639	639	639	639	624	624	624	624	596	596	596	571	571	571	547	547	547	537
	1	611	597	585	573	598	585	574	564	564	555	547	544	537	531	526	520	515	510
	2	584	560	540	523	572	551	532	517	533	519	506	518	506	495	503	493	485	484
	3	558	527	502	483	548	519	497	479	505	487	471	493	477	464	481	468	457	459
	4	534	497	470	450	525	491	466	447	480	459	442	469	451	437	460	444	432	436
RCR	5	511	470	442	421	503	466	439	420	456	433	416	448	428	412	440	422	409	415
	6	489	446	418	397	482	442	415	396	435	411	393	427	406	390	421	402	388	395
	7	469	425	396	375	463	421	394	374	415	390	372	409	387	371	403	384	369	377
	8	450	405	376	356	444	402	374	355	396	372	354	391	369	353	386	366	351	360
	9	433	386	358	339	427	384	357	338	379	355	337	375	352	336	370	350	335	345
	10	416	370	342	323	411	367	341	323	363	339	322	359	337	321	356	335	320	330

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	35.7 fc	3.8 ft
6.5 ft	25.5 fc	4.5 ft
7.5 ft	19.2 fc	5.2 ft
8.0 ft	16.9 fc	5.5 ft
10.0 ft	10.8 fc	6.9 ft
12.0 ft	7.5 fc	8.3 ft
14.0 ft	5.5 fc	9.7 ft
16.0 ft	4.2 fc	11.0 ft
20.0 ft	2.7 fc	13.8 ft
24.0 ft	1.9 fc	16.6 ft
28.0 ft	1.4 fc	19.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	369,744	369,744	369,744
45.00°	7,304	7,447	7,616
55.00°	3,817	3,639	4,120
65.00°	3,600	3,489	4,023
75.00°	3,630	4,181	3,376
85.00°	2,019	2,803	1,632

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	7.8	8.8	8.2	9.1	9.4	8.2	9.1	8.6	9.5	9.8
	3H	9.7	10.5	10.1	10.9	11.2	9.9	10.8	10.3	11.1	11.5
	4H	10.4	11.2	10.8	11.5	11.9	10.6	11.4	11.0	11.7	12.1
	6H	10.8	11.5	11.2	11.9	12.3	10.9	11.6	11.4	12.0	12.4
	8H	10.9	11.6	11.3	11.9	12.4	11.0	11.6	11.4	12.0	12.4
	12H	10.9	11.5	11.3	11.9	12.4	10.9	11.6	11.4	12.0	12.4
4H	2H	8.3	9.1	8.7	9.4	9.8	8.6	9.4	9.0	9.7	10.1
	3H	10.5	11.1	10.9	11.5	12.0	10.5	11.1	10.9	11.6	12.0
	4H	11.3	11.9	11.7	12.3	12.7	11.3	11.9	11.7	12.3	12.7
	6H	11.8	12.3	12.3	12.8	13.3	11.7	12.2	12.2	12.7	13.2
	8H	11.9	12.4	12.4	12.8	13.3	11.8	12.2	12.3	12.7	13.2
	12H	12.0	12.4	12.5	12.8	13.3	11.8	12.2	12.3	12.7	13.1
8H	4H	11.7	12.1	12.1	12.6	13.0	11.4	11.8	11.9	12.3	12.8
	6H	12.3	12.7	12.8	13.2	13.7	11.9	12.3	12.4	12.8	13.3
	8H	12.5	12.8	13.0	13.3	13.8	12.0	12.3	12.5	12.8	13.3
	12H	12.6	12.8	13.1	13.3	13.9	12.1	12.3	12.6	12.8	13.4
12H	4H	11.7	12.1	12.2	12.5	13.0	11.4	11.7	11.8	12.2	12.7
	6H	12.4	12.7	12.9	13.1	13.7	11.9	12.2	12.4	12.7	13.2
	8H	12.5	12.8	13.1	13.3	13.9	12.0	12.3	12.5	12.8	13.4

Corrected UGR values based on total output lumens

SHR = 1.0