

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03RMx xx 835 007 DLNFGP MW
Nominal 3" diam round recessed Infinium downlight

Test Number

SP-00759_2_M-007L

Test Date

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

Summary of Results

Power

Input Watts	7.4 W
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Lumen Output

Output Lumens	539
Efficacy	72.8 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.47
Two luminaires, plane 90°	0.48
Four luminaires	0.49

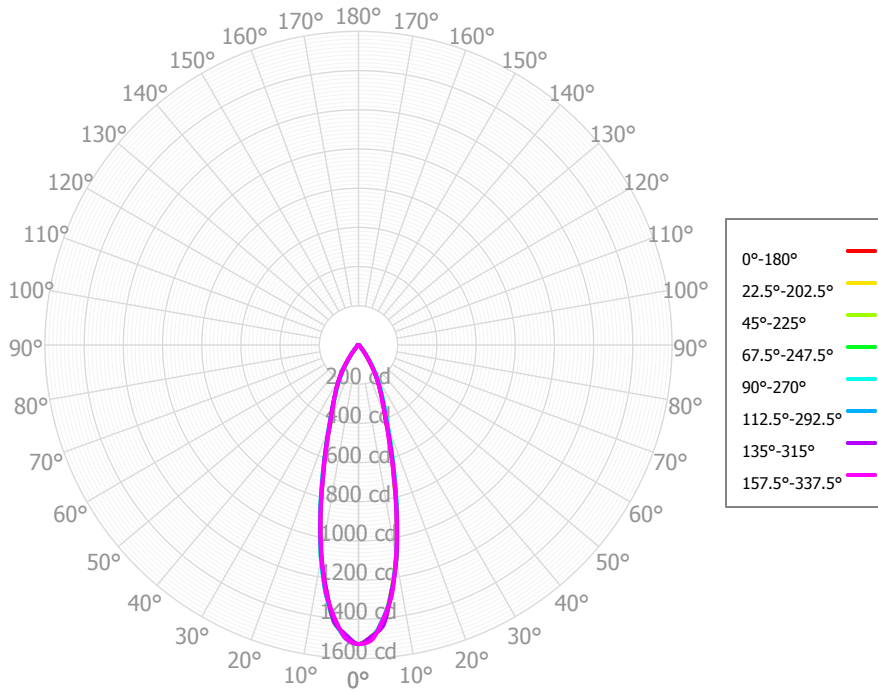
Full Beam Angle

0° - 180°	28°
90° - 270°	29°

IES File Header Contents

Keyword	Value
TEST	SP-00759_2_M-007L
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/8/2019
UPDATE	2/27/2019
LUMCAT	IF03RMx xx 835 007 DLNFGP MW
LUMINAIRE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 28 degrees
OTHER	Narrow 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°	125.87	23.36%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	194.67	36.13%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	128.87	23.92%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	59.10	10.97%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	13.95	2.59%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	7.22	1.34%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	5.27	0.98%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	3.03	0.56%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.73	0.14%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	538.72	99.99%	0.00° - 180.00°	538.75	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°	1,526.12	1,526.12	1,526.12	1,526.12	1,526.12	1,526.12	1,526.12	1,526.12	1,526.12	1,526.12	1,526.12	1,526.12	1,526.12	1,526.12	1,526.12	1,526.12	1,526.12
2.50°	1,490.60	1,498.15	1,489.61	1,491.10	1,495.86	1,499.86	1,480.40	1,499.42	1,482.85	1,494.48	1,488.43	1,488.34	1,497.90	1,505.14	1,489.98	1,509.11	1,490.60
5.00°	1,437.94	1,410.66	1,422.25	1,424.36	1,415.98	1,400.16	1,420.56	1,398.53	1,419.67	1,407.06	1,416.87	1,423.55	1,415.58	1,406.02	1,437.78	1,411.63	1,437.94
7.50°	1,274.73	1,279.86	1,272.86	1,276.46	1,280.91	1,280.48	1,259.69	1,275.25	1,260.36	1,274.44	1,269.57	1,273.29	1,280.61	1,290.06	1,277.65	1,293.40	1,274.73
10.00°	1,109.88	1,101.51	1,100.46	1,112.27	1,101.85	1,090.65	1,096.78	1,085.75	1,096.65	1,090.26	1,104.55	1,102.93	1,108.83	1,100.24	1,113.35	1,100.77	1,109.88
12.50°	897.80	895.73	902.02	908.52	912.16	901.48	896.99	895.74	892.84	900.03	901.32	906.86	906.28	899.96	903.46	894.87	897.80
15.00°	689.99	710.46	697.69	719.21	715.03	714.26	701.77	704.49	696.31	703.73	713.22	706.06	722.28	715.23	700.00	705.81	689.99
17.50°	540.30	535.34	551.23	560.17	561.39	549.67	556.65	538.97	546.89	546.80	553.02	558.59	551.74	532.02	545.76	519.04	540.30
20.00°	398.90	421.50	414.92	429.43	434.09	440.05	420.62	428.37	411.09	424.31	424.02	418.66	430.66	428.04	404.14	414.75	398.90
22.50°	332.22	333.88	340.00	349.44	349.02	347.28	352.10	338.59	344.05	339.75	344.48	345.24	341.05	328.91	333.90	318.13	332.22
25.00°	267.72	272.35	273.29	281.11	286.26	289.82	286.75	286.82	281.95	284.44	278.76	278.33	275.95	274.11	267.43	265.28	267.72
27.50°	217.16	220.22	222.88	231.09	233.18	235.74	239.39	236.91	239.59	235.53	232.26	228.71	224.28	220.41	218.00	214.91	217.16
30.00°	167.17	169.51	173.95	182.38	184.46	187.73	191.78	189.97	195.46	190.89	185.61	180.14	175.89	172.27	169.48	166.27	167.17
32.50°	119.96	119.23	128.03	135.46	139.13	141.59	143.08	143.72	145.46	144.80	138.76	135.40	129.06	124.63	124.20	117.86	119.96
35.00°	76.76	81.55	82.28	94.63	95.11	98.40	97.70	98.44	99.38	97.86	97.76	90.94	91.39	87.94	83.10	80.99	76.76
37.50°	49.49	46.99	56.16	61.08	64.97	63.85	64.33	62.60	64.09	64.37	62.98	62.98	57.40	52.78	54.41	45.23	49.49
40.00°	26.97	30.93	30.63	37.62	39.32	41.05	36.33	38.08	35.64	37.63	38.96	35.79	37.98	35.46	31.19	31.67	26.97
42.50°	19.80	18.48	22.50	24.63	26.81	25.39	24.38	22.21	23.29	23.98	24.90	25.75	23.50	19.59	21.83	18.91	19.80
45.00°	13.99	14.01	14.66	16.64	17.79	18.27	14.98	15.48	14.18	15.91	16.42	16.26	17.10	15.47	14.70	15.02	13.99
47.50°	11.90	10.75	12.56	13.16	13.83	13.63	11.96	11.37	11.59	12.01	12.50	13.30	13.00	11.73	12.34	11.40	11.90
50.00°	10.04	9.75	10.52	10.62	10.96	11.55	9.56	9.65	9.50	9.63	10.11	10.55	10.82	10.23	10.41	9.80	10.04
52.50°	8.72	9.00	9.10	8.85	9.74	9.79	8.45	8.26	8.28	8.33	8.79	9.59	9.07	8.83	9.28	8.36	8.72
55.00°	7.69	7.61	7.79	8.04	8.79	8.30	7.54	7.13	7.25	7.37	7.78	8.62	8.25	7.90	8.33	7.85	7.69
57.50°	7.26	6.18	7.33	7.90	7.76	7.54	6.99	6.49	6.48	6.74	6.95	7.64	7.59	6.94	7.65	7.31	7.26
60.00°	6.71	6.32	6.79	7.25	6.71	7.35	6.33	6.21	6.14	6.20	6.21	6.69	7.09	5.90	6.77	6.67	6.71
62.50°	5.96	6.51	5.74	6.28	6.46	6.98	5.47	5.79	6.37	5.63	5.54	5.85	6.61	5.04	5.60	6.00	5.96
65.00°	5.15	5.38	4.86	5.67	6.27	6.48	5.01	5.30	5.92	5.06	5.17	4.95	5.58	4.71	4.73	5.24	5.15
67.50°	4.25	4.29	4.79	5.25	5.47	5.81	5.06	4.54	4.78	4.36	4.92	3.85	4.56	4.31	4.22	4.46	4.25
70.00°	3.72	3.80	4.58	4.77	4.64	5.06	4.71	3.68	4.05	3.73	3.98	3.49	3.81	3.76	3.58	3.60	3.72
72.50°	3.57	3.33	3.98	4.27	3.66	4.32	4.13	3.62	3.52	3.57	3.12	3.87	3.11	3.14	2.83	2.91	3.57
75.00°	2.84	2.91	3.17	3.52	2.93	3.49	3.04	3.14	3.15	3.08	2.65	3.36	2.47	2.44	2.51	2.41	2.84
77.50°	1.93	2.23	2.15	2.70	2.88	2.48	2.32	1.90	2.50	2.33	2.06	2.38	2.10	1.83	2.18	1.77	1.93
80.00°	1.30	1.45	1.28	1.74	2.15	1.77	1.79	1.77	1.72	1.49	1.36	1.32	1.20	1.28	1.32	1.17	1.30
82.50°	0.86	0.94	0.73	0.91	1.19	0.98	0.97	1.04	1.07	0.75	0.67	0.77	0.51	0.76	0.67	0.70	0.86
85.00°	0.54	0.65	0.52	0.62	0.47	0.47	0.41	0.55	0.58	0.48	0.80	0.46	0.51	0.30	0.41	0.49	0.54
87.50°	0.51	0.40	0.53	0.67	0.55	0.39	0.49	0.40	0.60	0.57	0.47	0.60	0.00	0.47	0.39	0.44	0.51
90.00°	0.42	0.30	0.39	0.74	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.43	0.53	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.

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	641	641	641	641	626	626	626	626	599	599	599	573	573	573	550	550	539
	1	615	601	589	578	602	589	579	569	568	559	551	548	541	535	530	524	519
	2	589	565	546	530	577	556	539	524	539	525	512	523	512	501	508	499	491
	3	564	534	510	491	554	526	505	487	513	495	480	500	485	472	488	476	465
	4	541	506	480	460	532	500	476	457	489	468	452	478	461	447	469	454	442
	5	520	481	454	434	512	476	451	432	467	445	428	458	439	425	450	434	421
	6	500	459	431	411	492	455	429	410	447	424	407	440	420	404	433	416	402
	7	481	438	411	391	474	435	409	390	428	405	388	422	402	386	417	398	384
	8	463	420	392	373	457	417	391	373	411	388	371	406	385	370	402	383	368
	9	447	403	376	358	441	400	375	357	396	372	356	391	370	355	387	368	354
	10	431	387	361	343	426	385	360	343	381	358	342	377	356	341	374	354	340

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	50.5 fc	2.8 ft
6.5 ft	36.1 fc	3.3 ft
7.5 ft	27.1 fc	3.8 ft
8.0 ft	23.8 fc	4.1 ft
10.0 ft	15.3 fc	5.1 ft
12.0 ft	10.6 fc	6.1 ft
14.0 ft	7.8 fc	7.1 ft
16.0 ft	6.0 fc	8.1 ft
20.0 ft	3.8 fc	10.2 ft
24.0 ft	2.6 fc	12.2 ft
28.0 ft	1.9 fc	14.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	522,888	522,888	522,888
45.00°	6,781	7,105	8,622
55.00°	4,596	4,654	5,251
65.00°	4,173	3,942	5,086
75.00°	3,756	4,202	3,883
85.00°	2,110	2,056	1,838

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	8.4	9.4	8.8	9.7	10.0	9.1	10.1	9.5	10.4	10.7
	3H	10.0	10.9	10.4	11.2	11.6	10.8	11.7	11.2	12.0	12.4
	4H	10.7	11.5	11.1	11.8	12.2	11.5	12.2	11.9	12.6	13.0
	6H	11.0	11.7	11.4	12.1	12.5	11.9	12.6	12.3	13.0	13.4
	8H	11.1	11.7	11.5	12.1	12.5	12.0	12.6	12.4	13.0	13.4
	12H	11.1	11.7	11.5	12.1	12.6	12.0	12.6	12.4	13.0	13.4
4H	2H	8.9	9.6	9.3	10.0	10.4	9.5	10.3	9.9	10.6	11.0
	3H	10.7	11.3	11.1	11.7	12.2	11.5	12.1	11.9	12.6	13.0
	4H	11.5	12.1	11.9	12.5	12.9	12.3	12.9	12.8	13.3	13.8
	6H	11.9	12.4	12.4	12.8	13.3	12.9	13.3	13.3	13.8	14.3
	8H	12.0	12.4	12.5	12.9	13.4	12.9	13.4	13.4	13.8	14.3
	12H	12.0	12.4	12.5	12.9	13.4	12.9	13.3	13.4	13.8	14.3
8H	4H	11.7	12.2	12.2	12.6	13.1	12.5	13.0	13.0	13.4	13.9
	6H	12.2	12.6	12.7	13.1	13.6	13.1	13.5	13.6	14.0	14.5
	8H	12.3	12.7	12.9	13.2	13.7	13.2	13.6	13.8	14.1	14.6
	12H	12.5	12.7	13.0	13.2	13.8	13.3	13.6	13.8	14.1	14.6
12H	4H	11.7	12.1	12.2	12.6	13.1	12.5	12.9	13.0	13.4	13.8
	6H	12.2	12.5	12.8	13.0	13.6	13.1	13.4	13.6	13.9	14.5
	8H	12.4	12.6	12.9	13.1	13.7	13.3	13.5	13.8	14.0	14.6

Corrected UGR values based on total output lumens

SHR = 1.0