

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03RMx xx 835 010 DLFLGC MW
Nominal 3" diam round recessed Infinium downlight

Test Number

SP-00758_M-10L

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	738
Efficacy	79.35 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

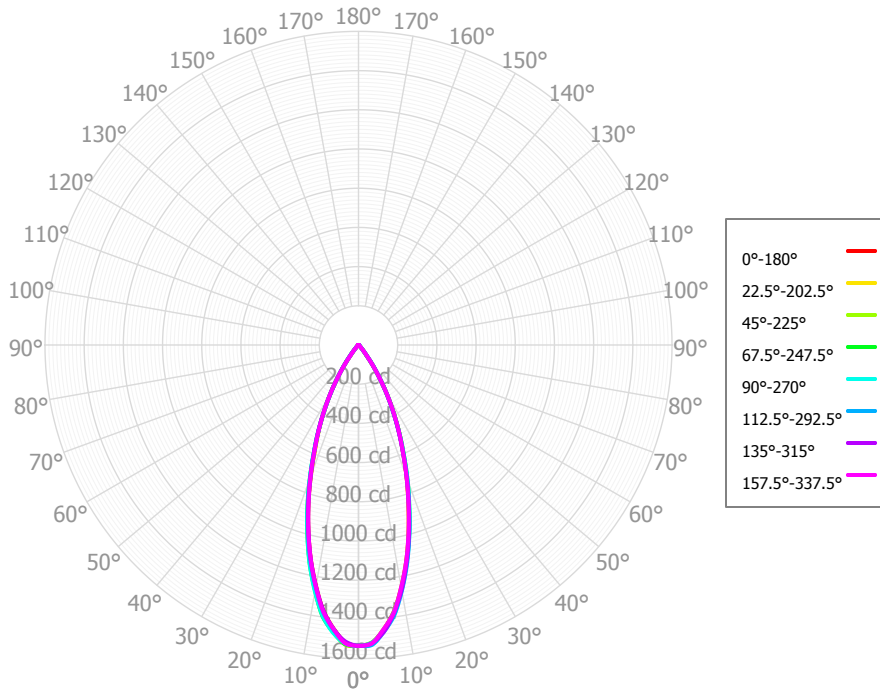
Full Beam Angle

0° - 180°	38°
90° - 270°	39°

IES File Header Contents

Keyword	Value
TEST	SP-00758_M-10L
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/8/2019
UPDATE	2/27/2019
LUMCAT	IF03RMx xx 835 010 DLFLGC MW
LUMINAIRE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 38 degrees
OTHER	Flood optic, Clear glass 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°	134.91	18.28%	90.00° - 100.00°	0.04	0.01%
10.00° - 20.00°	272.06	36.86%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	220.02	29.81%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	84.72	11.48%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	13.63	1.85%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	5.51	0.75%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	3.90	0.53%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	2.38	0.32%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.82	0.11%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	737.95	99.99%	0.00° - 180.00°	737.98	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°	1,534.88	1,534.88	1,534.88	1,534.88	1,534.88	1,534.88	1,534.88	1,534.88	1,534.88	1,534.88	1,534.88	1,534.88	1,534.88	1,534.88	1,534.88	1,534.88	1,534.88
2.50°	1,521.89	1,529.85	1,520.18	1,525.36	1,521.60	1,522.65	1,515.29	1,524.97	1,519.37	1,531.30	1,520.92	1,529.57	1,525.25	1,533.01	1,524.29	1,525.77	1,521.89
5.00°	1,459.33	1,457.50	1,464.30	1,461.65	1,464.12	1,456.23	1,457.60	1,455.57	1,453.53	1,458.06	1,466.66	1,472.46	1,475.48	1,471.21	1,471.30	1,457.25	1,459.33
7.50°	1,374.50	1,381.31	1,376.56	1,381.81	1,378.26	1,376.97	1,369.61	1,374.21	1,369.70	1,380.65	1,382.30	1,398.93	1,396.63	1,393.35	1,381.68	1,378.76	1,374.50
10.00°	1,257.62	1,256.05	1,264.21	1,263.40	1,266.07	1,256.74	1,251.47	1,253.02	1,248.66	1,255.82	1,264.03	1,275.77	1,277.68	1,274.20	1,268.71	1,254.25	1,257.62
12.50°	1,127.31	1,129.34	1,132.53	1,134.21	1,137.05	1,132.27	1,124.00	1,124.93	1,122.64	1,128.90	1,136.23	1,147.95	1,148.65	1,144.21	1,134.96	1,126.70	1,127.31
15.00°	988.37	987.25	995.40	998.10	1,001.60	994.67	987.44	987.28	986.54	990.26	998.07	1,006.93	1,006.39	1,002.08	995.89	986.29	988.37
17.50°	846.03	846.43	854.14	860.20	862.13	857.67	850.81	848.10	849.61	851.21	857.93	866.13	865.50	856.99	852.32	847.81	846.03
20.00°	717.53	718.46	723.39	729.67	730.25	722.43	714.12	717.73	711.09	715.58	715.74	725.92	726.28	724.22	719.08	717.06	717.53
22.50°	594.15	592.87	600.20	600.99	602.85	593.95	592.09	588.68	584.40	580.03	590.04	593.96	598.38	594.20	594.16	591.68	594.15
25.00°	486.70	487.95	488.37	490.13	489.04	483.88	482.96	482.59	479.08	478.31	480.78	483.33	484.27	483.85	482.45	486.70	486.70
27.50°	384.98	384.14	384.42	383.39	382.85	378.76	380.93	379.57	378.19	377.01	378.86	378.08	378.50	377.74	381.14	383.82	384.98
30.00°	290.58	288.82	288.81	289.66	289.35	286.75	285.02	288.64	285.09	286.98	283.99	285.87	282.41	286.52	288.02	288.32	290.58
32.50°	198.64	196.59	198.76	198.77	202.80	201.38	201.40	199.18	199.24	197.13	200.45	200.60	198.82	198.25	201.03	198.55	198.64
35.00°	128.78	126.76	127.74	130.70	134.06	132.50	127.84	130.69	125.48	129.46	127.27	131.74	129.01	131.61	130.86	127.90	128.78
37.50°	65.88	63.22	68.78	67.32	74.54	75.12	75.75	64.51	68.68	62.64	74.44	74.50	76.01	68.85	72.64	68.07	65.88
40.00°	39.02	40.48	37.00	41.71	42.71	44.64	40.40	39.74	39.19	40.33	39.59	43.14	41.14	41.93	39.25	42.68	39.02
42.50°	23.21	20.36	21.81	23.15	24.45	21.79	21.35	18.91	19.34	18.50	20.47	20.12	20.73	21.19	23.11	22.21	23.21
45.00°	15.98	15.60	14.25	16.49	15.63	16.31	14.75	14.05	14.45	14.06	14.76	14.62	15.13	15.33	14.59	16.35	15.98
47.50°	11.21	11.24	11.18	11.89	11.32	11.71	10.93	10.60	10.55	9.72	10.76	10.26	11.20	11.78	11.10	11.46	11.21
50.00°	8.76	9.13	9.07	9.44	8.76	9.01	9.14	8.60	8.10	7.93	8.15	8.24	8.89	9.16	8.78	9.34	8.76
52.50°	6.93	7.23	7.50	7.34	6.99	6.95	7.48	6.71	6.31	6.21	6.46	6.57	7.13	6.67	7.22	7.53	6.93
55.00°	5.85	6.41	6.23	6.19	5.84	6.16	5.92	5.65	5.46	5.82	5.48	5.57	5.92	5.72	6.16	6.56	5.85
57.50°	4.97	5.59	5.12	5.18	4.96	5.51	5.01	4.63	4.82	5.42	5.03	4.84	5.04	4.97	5.39	5.52	4.97
60.00°	4.63	4.82	4.70	4.79	4.78	5.15	4.55	4.23	4.47	5.01	4.98	4.63	4.47	4.62	4.96	4.32	4.63
62.50°	4.43	4.14	4.63	4.47	4.91	4.73	4.32	3.87	4.10	4.59	4.71	4.32	4.04	4.32	4.72	3.53	4.43
65.00°	4.04	3.90	4.12	4.09	4.23	4.22	4.23	3.63	3.71	3.96	4.29	3.83	3.73	4.08	4.32	3.74	4.04
67.50°	3.61	3.60	3.42	3.70	3.25	3.71	3.78	3.38	3.30	3.37	3.70	3.33	3.37	3.85	3.85	3.58	3.61
70.00°	2.86	3.16	2.83	3.35	3.06	3.21	3.17	3.07	2.86	2.92	3.02	2.81	2.96	3.31	3.26	2.75	2.86
72.50°	2.19	2.64	2.29	2.84	3.01	2.64	2.71	2.84	2.62	2.60	2.95	2.53	2.64	2.81	2.65	2.37	2.19
75.00°	1.99	2.06	1.96	1.85	2.59	2.08	2.27	2.74	2.37	2.45	2.77	2.33	2.27	2.45	2.36	2.31	1.99
77.50°	1.80	1.61	1.72	1.66	2.11	1.79	1.84	1.80	1.87	1.92	2.19	1.88	1.77	1.83	1.87	1.77	1.80
80.00°	1.49	1.18	1.51	1.54	1.57	1.50	1.53	1.13	1.53	1.49	1.81	1.49	1.39	1.23	1.19	1.33	1.49
82.50°	0.83	0.82	1.05	0.86	1.12	0.95	1.13	0.90	0.89	1.11	1.14	0.90	0.79	0.99	0.93	0.98	0.83
85.00°	0.73	0.62	0.57	0.57	0.61	0.60	0.55	0.68	0.50	0.72	0.68	0.61	0.55	0.68	0.63	0.78	0.73
87.50°	0.58	0.52	0.50	0.65	0.57	0.55	0.52	0.61	0.48	0.55	0.63	0.50	0.56	0.47	0.63	0.57	0.58
90.00°	0.55	0.52	0.60	0.34	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.52	0.63	0.55
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	879	879	879	879	858	858	858	858	820	820	820	785	785	785	753	753	738
	1	842	823	806	791	824	807	792	779	778	766	755	750	741	732	725	718	704
	2	806	774	747	725	790	761	737	717	738	718	701	716	700	686	696	683	670
	3	772	730	697	671	758	720	690	666	701	676	656	683	663	645	667	650	638
	4	739	690	655	627	727	682	649	623	667	639	616	653	629	609	639	619	608
	5	709	655	617	589	698	648	613	587	636	605	582	624	597	577	613	590	580
	6	680	623	584	557	670	617	581	555	607	575	551	597	569	547	588	563	554
	7	653	593	555	527	644	589	552	526	580	547	523	571	542	521	564	538	529
	8	627	566	528	501	619	562	526	500	555	522	498	548	518	496	541	514	506
	9	603	541	503	478	596	538	502	477	532	499	475	525	495	474	520	493	485
	10	581	518	481	456	574	516	480	456	510	477	455	505	475	453	500	472	465

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	50.7 fc	3.8 ft
6.5 ft	36.3 fc	4.5 ft
7.5 ft	27.3 fc	5.2 ft
8.0 ft	24.0 fc	5.6 ft
10.0 ft	15.3 fc	6.9 ft
12.0 ft	10.7 fc	8.3 ft
14.0 ft	7.8 fc	9.7 ft
16.0 ft	6.0 fc	11.1 ft
20.0 ft	3.8 fc	13.9 ft
24.0 ft	2.7 fc	16.7 ft
28.0 ft	2.0 fc	19.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	525,890	525,890	525,890
45.00°	7,744	6,905	7,574
55.00°	3,495	3,722	3,491
65.00°	3,273	3,343	3,430
75.00°	2,640	2,596	3,429
85.00°	2,851	2,226	2,397

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	5.7	6.6	6.1	7.0	7.3	5.4	6.3	5.7	6.6	6.9
	3H	7.4	8.2	7.8	8.5	8.9	7.1	8.0	7.5	8.3	8.7
	4H	7.9	8.7	8.3	9.0	9.4	7.9	8.7	8.3	9.1	9.4
	6H	8.5	9.1	8.9	9.5	9.9	8.5	9.2	9.0	9.6	10.0
	8H	8.6	9.2	9.0	9.6	10.0	8.7	9.3	9.1	9.7	10.2
	12H	8.7	9.3	9.1	9.7	10.1	8.8	9.4	9.2	9.8	10.2
4H	2H	6.3	7.1	6.7	7.4	7.8	6.0	6.8	6.5	7.2	7.5
	3H	8.1	8.7	8.5	9.1	9.5	8.0	8.6	8.4	9.0	9.4
	4H	8.8	9.4	9.2	9.8	10.2	8.8	9.4	9.3	9.8	10.3
	6H	9.4	9.9	9.9	10.3	10.8	9.6	10.0	10.0	10.5	11.0
	8H	9.6	10.0	10.1	10.5	11.0	9.8	10.2	10.2	10.7	11.1
	12H	9.7	10.1	10.2	10.6	11.1	9.9	10.3	10.4	10.7	11.2
8H	4H	9.0	9.5	9.5	9.9	10.4	9.2	9.6	9.6	10.1	10.5
	6H	9.8	10.1	10.3	10.6	11.1	10.0	10.4	10.5	10.9	11.4
	8H	10.0	10.3	10.6	10.8	11.3	10.3	10.6	10.8	11.1	11.6
	12H	10.3	10.5	10.8	11.0	11.6	10.5	10.8	11.0	11.3	11.8
12H	4H	9.0	9.4	9.5	9.9	10.4	9.2	9.5	9.7	10.0	10.5
	6H	9.8	10.1	10.3	10.6	11.1	10.1	10.4	10.6	10.9	11.4
	8H	10.1	10.4	10.6	10.9	11.5	10.4	10.7	10.9	11.2	11.8

Corrected UGR values based on total output lumens

SHR = 1.0