

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-00759_1_M-010L

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	776
Efficacy	83.49 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°	0.47
Four luminaires	0.48

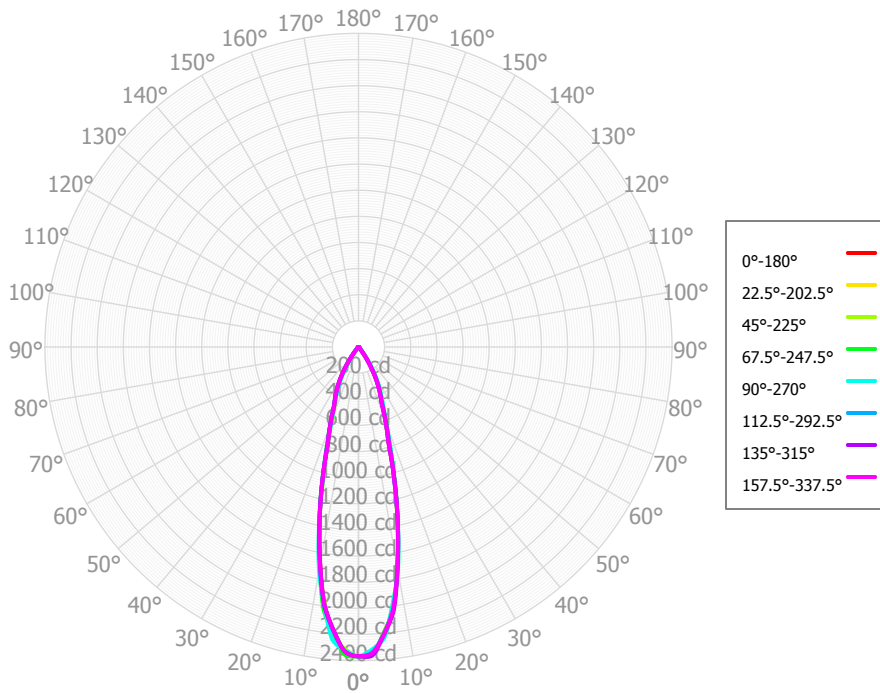
Full Beam Angle

0° - 180°	28°
90° - 270°	28°

IES File Header Contents

Keyword	Value
TEST	SP-00759_1_M-010L
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/8/2019
UPDATE	2/27/2019
LUMCAT	IF03RMx xx 835 010 DLNFGN MW
LUMINAIRE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 28 degrees
OTHER	Narrow flood optic, open aperture / no lens
OTHER	Aluminum bezel
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°	197.05	25.38%	90.00° - 100.00°	0.05	0.01%
10.00° - 20.00°	292.45	37.67%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	185.45	23.88%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	73.15	9.42%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	9.82	1.26%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	6.01	0.77%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	7.37	0.95%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	4.12	0.53%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.97	0.12%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	776.36	99.99%	0.00° - 180.00°	776.41	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°	2,367.59	2,367.59	2,367.59	2,367.59	2,367.59	2,367.59	2,367.59	2,367.59	2,367.59	2,367.59	2,367.59	2,367.59	2,367.59	2,367.59	2,367.59	2,367.59	2,367.59
2.50°	2,352.50	2,360.41	2,325.03	2,357.93	2,319.74	2,333.21	2,336.24	2,337.49	2,335.98	2,352.02	2,316.25	2,358.77	2,325.51	2,341.60	2,365.44	2,348.99	2,352.50
5.00°	2,204.93	2,201.04	2,234.35	2,199.49	2,239.11	2,188.12	2,179.39	2,181.34	2,182.65	2,188.18	2,226.36	2,200.14	2,255.47	2,213.43	2,213.76	2,213.46	2,204.93
7.50°	2,027.74	2,036.20	1,995.41	2,032.49	1,991.82	2,000.22	1,998.80	1,992.69	1,993.14	2,011.79	1,981.74	2,034.20	1,998.73	2,023.95	2,046.44	2,030.66	2,027.74
10.00°	1,715.62	1,710.77	1,734.48	1,711.85	1,736.49	1,705.24	1,691.47	1,693.88	1,688.69	1,697.65	1,718.24	1,711.23	1,738.18	1,712.34	1,721.46	1,714.20	1,715.62
12.50°	1,381.14	1,385.77	1,388.77	1,391.80	1,393.24	1,376.99	1,383.50	1,372.88	1,381.46	1,383.64	1,385.09	1,389.29	1,393.86	1,393.90	1,386.31	1,392.92	1,381.14
15.00°	1,068.70	1,069.41	1,064.20	1,078.33	1,061.70	1,078.79	1,072.77	1,075.27	1,066.86	1,070.56	1,046.00	1,079.55	1,057.10	1,063.53	1,071.54	1,060.10	1,068.70
17.50°	759.06	765.78	808.07	783.13	818.14	788.26	794.78	781.29	795.16	779.87	811.27	786.13	815.76	792.92	757.84	778.28	759.06
20.00°	606.23	614.06	594.14	626.63	596.86	626.42	631.98	626.10	622.13	618.97	581.48	627.54	589.74	612.77	609.19	602.44	606.23
22.50°	466.78	470.90	494.58	482.25	500.82	491.57	492.24	486.42	484.76	475.20	491.38	480.90	491.60	475.23	463.29	462.88	466.78
25.00°	391.32	396.26	402.03	408.49	409.01	413.46	421.18	416.54	417.66	410.91	403.25	406.67	396.35	394.66	389.50	388.27	391.32
27.50°	319.14	320.54	325.61	334.22	336.36	344.57	348.80	351.96	348.50	344.38	333.56	332.02	318.75	315.79	315.37	311.70	319.14
30.00°	235.49	238.15	248.59	257.56	263.55	270.06	273.12	275.26	275.79	269.47	263.53	255.31	242.17	238.91	236.64	232.08	235.49
32.50°	152.03	158.92	170.35	182.69	190.18	194.86	198.36	198.09	200.77	195.03	187.18	180.50	170.60	166.56	159.64	157.63	152.03
35.00°	92.17	94.62	103.16	114.42	121.99	128.50	125.60	127.50	122.29	122.08	113.30	113.09	104.45	98.91	98.01	90.27	92.17
37.50°	34.67	40.54	55.07	57.04	69.74	62.86	67.24	58.21	63.97	61.71	66.91	56.34	59.40	53.27	42.57	45.02	34.67
40.00°	23.35	25.42	22.90	33.43	29.25	38.51	35.75	34.86	31.96	34.59	24.86	33.52	23.16	27.53	27.24	26.18	23.35
42.50°	12.79	13.41	14.96	15.48	19.22	16.15	14.54	12.73	12.86	14.34	15.94	15.57	15.72	14.02	13.91	14.85	12.79
45.00°	10.89	11.37	9.95	12.29	11.68	12.67	9.93	9.56	8.66	9.52	8.18	10.83	9.89	10.17	10.77	11.49	10.89
47.50°	9.10	9.51	8.84	9.75	9.69	9.48	7.25	6.66	6.62	6.19	7.28	7.41	8.48	8.03	8.11	9.07	9.10
50.00°	8.24	8.16	8.04	8.69	8.19	8.76	7.33	6.59	6.77	5.73	6.47	7.02	7.25	7.08	7.37	7.52	8.24
52.50°	7.45	7.25	7.59	7.67	7.63	8.02	7.24	6.48	6.57	5.55	6.04	6.45	6.42	6.87	6.70	6.78	7.45
55.00°	7.02	7.33	7.13	6.75	7.23	6.84	6.94	6.20	6.04	5.85	5.66	5.52	5.70	7.11	6.22	6.70	7.02
57.50°	6.74	7.59	6.64	6.26	7.09	5.85	6.95	6.08	5.77	6.11	5.44	5.28	5.18	6.86	6.18	6.87	6.74
60.00°	7.17	8.20	7.08	6.50	7.35	7.08	7.31	6.87	5.71	6.32	5.54	6.24	5.54	6.35	7.36	7.21	7.17
62.50°	7.60	8.65	8.37	7.15	8.20	8.25	7.59	7.50	6.28	6.73	6.63	6.82	7.41	6.48	8.27	7.81	7.60
65.00°	8.05	8.83	8.41	8.39	8.35	8.97	7.80	7.44	7.31	7.39	7.28	6.82	8.19	6.91	8.49	8.57	8.05
67.50°	7.97	8.16	7.45	8.19	7.61	9.19	7.54	7.29	7.62	7.43	6.86	6.55	7.48	6.64	8.18	7.59	7.97
70.00°	6.55	6.38	6.32	6.30	6.44	7.32	6.91	6.84	7.57	6.87	5.93	6.01	6.27	6.15	6.99	5.80	6.55
72.50°	4.86	4.78	5.09	4.49	4.88	5.99	5.85	5.96	5.90	5.50	4.42	4.94	4.74	4.46	5.00	4.28	4.86
75.00°	2.91	3.30	3.71	2.73	3.85	5.41	4.63	4.61	4.16	3.90	3.50	3.68	3.53	3.08	2.48	2.98	2.91
77.50°	2.07	2.29	2.61	2.49	3.04	4.20	3.25	3.63	2.96	2.72	2.68	2.41	2.49	2.40	1.93	2.15	2.07
80.00°	1.39	1.29	2.04	1.95	2.43	2.89	2.35	2.46	2.28	1.91	1.86	1.70	1.53	1.47	1.31	1.38	1.39
82.50°	0.89	0.71	1.30	1.28	1.45	1.61	1.28	1.24	1.17	1.16	0.98	1.05	0.66	0.91	0.75	1.12	0.89
85.00°	0.77	0.75	0.68	0.90	0.93	0.59	0.59	0.71	0.67	0.69	0.43	0.51	0.65	0.65	0.55	0.94	0.77
87.50°	0.54	0.78	0.51	0.70	0.74	0.67	0.64	0.60	0.64	0.60	0.60	0.61	0.66	0.70	0.68	0.71	0.54
90.00°	0.79	0.58	0.65	0.65	0.60	0.96	0.61	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.79
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	924	924	924	924	903	903	903	903	863	863	863	826	826	826	792	792	776
	1	887	868	851	836	868	852	836	823	820	808	797	792	782	774	765	758	743
	2	852	819	792	769	835	806	782	761	781	761	744	759	743	729	738	725	711
	3	818	776	743	717	803	765	736	712	746	721	700	728	707	690	711	694	681
	4	787	738	702	675	774	729	696	671	713	685	663	699	675	655	685	665	653
	5	757	704	666	638	746	697	662	636	684	653	630	671	645	625	660	638	627
	6	730	673	635	607	719	667	631	605	656	625	601	646	619	598	637	613	602
	7	704	645	607	580	694	640	604	578	631	599	576	622	594	573	614	589	580
	8	679	619	581	555	671	615	579	554	607	575	552	600	571	550	593	567	559
	9	656	596	558	533	649	592	557	532	586	553	531	579	550	529	574	547	539
	10	635	574	537	513	628	571	536	512	565	533	511	560	531	510	555	528	521

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	78.3 fc	2.8 ft
6.5 ft	56.0 fc	3.3 ft
7.5 ft	42.1 fc	3.8 ft
8.0 ft	37.0 fc	4.0 ft
10.0 ft	23.7 fc	5.0 ft
12.0 ft	16.4 fc	6.0 ft
14.0 ft	12.1 fc	7.0 ft
16.0 ft	9.2 fc	8.0 ft
20.0 ft	5.9 fc	10.0 ft
24.0 ft	4.1 fc	12.0 ft
28.0 ft	3.0 fc	14.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	811,199	811,199	811,199
45.00°	5,275	4,823	5,659
55.00°	4,194	4,258	4,316
65.00°	6,529	6,817	6,771
75.00°	3,846	4,910	5,096
85.00°	3,039	2,662	3,654

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	7.5	8.5	7.9	8.8	9.1	6.0	6.9	6.4	7.2	7.6
	3H	11.1	11.9	11.5	12.2	12.6	10.6	11.4	11.0	11.8	12.1
	4H	11.6	12.3	12.0	12.7	13.1	11.5	12.2	11.9	12.6	13.0
	6H	11.7	12.4	12.1	12.8	13.2	11.9	12.6	12.3	13.0	13.4
	8H	11.7	12.4	12.2	12.8	13.2	12.0	12.6	12.4	13.0	13.4
	12H	11.8	12.4	12.2	12.8	13.2	12.0	12.6	12.5	13.0	13.5
4H	2H	9.0	9.7	9.4	10.1	10.5	7.7	8.5	8.1	8.8	9.2
	3H	12.1	12.7	12.5	13.1	13.5	11.8	12.4	12.2	12.8	13.2
	4H	12.6	13.1	13.0	13.6	14.0	12.7	13.3	13.2	13.7	14.2
	6H	12.8	13.2	13.2	13.7	14.2	13.3	13.7	13.7	14.2	14.7
	8H	12.8	13.2	13.3	13.7	14.2	13.3	13.8	13.8	14.2	14.7
	12H	12.8	13.2	13.3	13.7	14.2	13.4	13.8	13.9	14.2	14.7
8H	4H	12.7	13.1	13.2	13.6	14.1	13.0	13.4	13.5	13.9	14.4
	6H	13.0	13.3	13.5	13.8	14.3	13.6	14.0	14.2	14.5	15.0
	8H	13.0	13.3	13.6	13.9	14.4	13.8	14.1	14.3	14.6	15.1
	12H	13.1	13.4	13.7	13.9	14.5	13.9	14.1	14.4	14.6	15.2
12H	4H	12.7	13.0	13.2	13.5	14.0	13.0	13.4	13.5	13.9	14.3
	6H	13.0	13.3	13.5	13.7	14.3	13.6	14.0	14.2	14.4	15.0
	8H	13.1	13.3	13.6	13.8	14.4	13.8	14.1	14.3	14.6	15.2

Corrected UGR values based on total output lumens

SHR = 1.0