

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
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Spectrum Lighting Photometric Lab

Luminaire

IF03RMx xx 835 015 DLFLGP MW
Nominal 3" diam round recessed Infinium downlight

Test Number

SP-00758_2_M-015L

Test Date

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

Summary of Results

Power

Input Watts	12.2 W
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Lumen Output

Output Lumens	1046
Efficacy	85.76 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

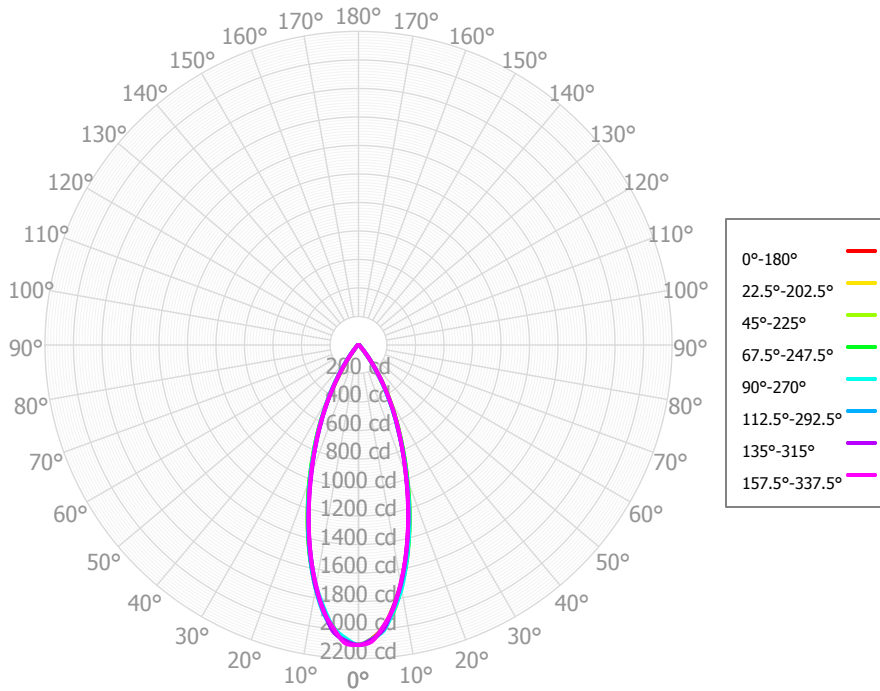
Full Beam Angle

0° - 180°	38°
90° - 270°	38°

IES File Header Contents

Keyword	Value
TEST	SP-00758_2_M-015L
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/8/2019
UPDATE	2/27/2019
LUMCAT	IF03RMx xx 835 015 DLFLGP MW
LUMINAIRE	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°	183.74	17.56%	90.00° - 100.00°	0.07	0.01%
10.00° - 20.00°	371.26	35.48%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	304.17	29.07%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	129.42	12.37%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	28.71	2.74%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	12.96	1.24%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	9.20	0.88%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	5.36	0.51%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.36	0.13%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1,046.19	99.99%	0.00° - 180.00°	1,046.26	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°	2,104.34	2,104.34	2,104.34	2,104.34	2,104.34	2,104.34	2,104.34	2,104.34	2,104.34	2,104.34	2,104.34	2,104.34	2,104.34	2,104.34	2,104.34	2,104.34	2,104.34
2.50°	2,065.10	2,075.87	2,066.01	2,078.74	2,068.30	2,089.47	2,076.72	2,096.31	2,073.72	2,083.96	2,067.90	2,078.27	2,059.46	2,077.76	2,069.95	2,084.65	2,065.10
5.00°	1,989.30	1,983.92	2,005.47	1,995.04	2,014.70	2,010.02	2,021.88	1,996.00	2,004.71	1,996.80	2,006.74	1,990.31	1,994.90	1,988.89	2,004.92	1,982.83	1,989.30
7.50°	1,858.06	1,868.91	1,872.63	1,887.73	1,882.34	1,894.63	1,875.02	1,883.64	1,873.42	1,885.33	1,875.72	1,881.83	1,859.53	1,867.83	1,860.08	1,867.46	1,858.06
10.00°	1,705.32	1,710.11	1,729.50	1,728.93	1,740.56	1,734.79	1,725.33	1,712.51	1,720.85	1,724.35	1,731.82	1,722.62	1,713.38	1,708.04	1,708.84	1,699.50	1,705.32
12.50°	1,528.17	1,541.25	1,551.95	1,560.58	1,556.73	1,555.27	1,535.84	1,537.77	1,539.65	1,551.17	1,553.35	1,553.22	1,535.54	1,534.95	1,524.86	1,526.76	1,528.17
15.00°	1,343.81	1,356.59	1,371.68	1,375.42	1,370.43	1,361.81	1,346.15	1,345.05	1,353.46	1,360.90	1,371.68	1,368.59	1,355.51	1,348.83	1,340.07	1,340.13	1,343.81
17.50°	1,159.59	1,172.74	1,183.56	1,189.50	1,176.19	1,163.48	1,154.20	1,152.88	1,161.81	1,167.69	1,183.06	1,181.89	1,170.48	1,163.47	1,152.25	1,155.62	1,159.59
20.00°	975.41	989.91	995.82	1,002.52	983.12	982.01	966.21	977.99	983.60	993.48	1,002.21	1,005.40	991.69	978.72	971.63	976.06	975.41
22.50°	817.99	824.30	833.52	831.86	819.83	805.06	804.72	805.70	817.70	821.28	834.77	829.66	824.56	814.07	811.22	810.64	817.99
25.00°	664.66	676.48	673.91	680.27	659.34	656.14	648.12	660.06	664.12	669.38	675.62	677.57	668.90	662.79	660.92	671.25	664.66
27.50°	542.09	543.65	548.01	541.87	526.58	512.55	514.08	517.30	519.71	518.57	527.99	526.68	530.41	530.09	533.10	539.38	542.09
30.00°	422.25	423.78	424.13	416.18	397.61	394.47	386.55	392.13	389.59	390.23	393.41	400.87	404.72	407.30	412.64	418.64	422.25
32.50°	312.50	313.74	314.90	305.13	292.75	279.60	280.87	274.20	268.07	264.14	273.99	278.22	294.55	302.36	305.34	308.11	312.50
35.00°	203.74	210.58	211.85	205.56	195.37	197.98	186.97	188.23	179.23	179.27	180.10	192.40	202.98	205.19	211.94	210.19	203.74
37.50°	136.34	136.20	139.12	133.83	130.49	118.63	123.77	113.66	106.56	99.57	110.34	112.44	130.30	139.46	138.55	134.90	136.34
40.00°	71.92	78.09	76.72	80.04	75.18	81.75	73.56	75.99	68.26	68.49	66.55	74.23	81.39	84.33	85.06	82.34	71.92
42.50°	49.81	48.10	50.79	49.01	50.40	46.26	50.32	45.75	43.30	40.64	42.71	40.99	52.14	56.32	55.51	49.75	49.81
45.00°	29.39	31.16	29.97	29.90	30.65	34.15	33.14	33.92	32.09	31.40	29.25	31.27	34.42	35.12	35.77	33.48	29.39
47.50°	22.78	22.67	23.09	21.30	23.60	22.81	26.00	24.93	24.95	23.41	22.44	22.95	24.43	25.82	25.62	23.67	22.78
50.00°	16.86	17.24	17.36	17.04	18.00	20.02	20.44	21.66	20.67	20.46	18.17	19.44	19.05	18.72	19.21	18.25	16.86
52.50°	14.52	15.05	14.11	14.78	15.28	17.33	17.02	18.66	17.03	17.63	15.20	16.38	16.23	16.16	15.77	15.31	14.52
55.00°	12.46	13.74	11.88	13.17	13.45	15.36	14.57	16.10	15.61	15.20	13.99	14.52	14.10	14.13	13.80	13.74	12.46
57.50°	11.44	12.39	11.41	11.97	13.06	13.50	13.23	13.99	14.52	13.06	13.48	12.55	12.29	12.52	12.80	12.42	11.44
60.00°	10.45	11.04	10.56	10.86	12.18	12.12	11.90	12.45	13.02	11.64	11.73	10.38	11.03	10.92	11.75	11.21	10.45
62.50°	9.54	10.16	9.20	10.30	10.65	10.78	10.58	10.91	11.48	10.34	9.57	8.80	9.97	10.51	10.67	10.70	9.54
65.00°	8.66	9.35	8.39	9.83	9.68	9.59	9.13	9.35	9.26	9.26	8.82	8.21	9.10	10.09	9.57	10.42	8.66
67.50°	7.84	8.35	8.23	8.49	9.30	8.45	7.61	7.94	7.26	8.01	8.36	7.54	8.26	9.03	8.47	9.50	7.84
70.00°	7.12	7.31	7.67	7.11	8.06	7.41	6.42	6.64	6.83	6.56	6.53	6.78	7.60	7.92	8.17	8.42	7.12
72.50°	6.52	5.99	6.81	6.12	6.22	6.27	5.32	5.58	5.83	5.86	4.94	6.13	6.79	6.61	8.02	6.69	6.52
75.00°	5.35	5.05	6.16	5.15	4.97	5.09	4.10	4.54	4.13	5.20	3.87	5.25	5.54	5.62	6.75	5.11	5.35
77.50°	3.92	4.70	5.19	4.19	3.69	4.39	2.90	3.43	3.33	3.70	3.11	3.33	4.40	4.90	5.24	3.93	3.92
80.00°	2.57	3.53	3.19	3.03	2.17	2.69	1.95	2.21	2.32	2.10	2.32	2.19	2.83	3.73	3.46	2.83	2.57
82.50°	1.54	2.10	2.04	1.81	1.08	1.22	1.32	1.39	1.32	1.11	1.38	1.18	1.31	1.93	1.68	1.65	1.54
85.00°	1.00	1.11	1.39	1.10	0.81	1.02	0.92	0.92	0.77	0.88	1.19	0.83	0.99	1.08	1.08	0.91	1.00
87.50°	0.84	1.19	1.02	1.03	0.74	0.86	0.78	0.74	0.92	0.80	1.02	0.97	0.83	1.15	1.00	0.85	0.84
90.00°	0.82	0.95	0.94	1.04	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18	0.80	1.12	0.82
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	1,246	1,246	1,246	1,246	1,217	1,217	1,217	1,217	1,162	1,162	1,162	1,113	1,113	1,113	1,068	1,068	1,046
	1	1,192	1,164	1,140	1,118	1,166	1,142	1,120	1,100	1,100	1,082	1,066	1,061	1,047	1,034	1,025	1,015	994
	2	1,139	1,091	1,052	1,020	1,116	1,074	1,038	1,008	1,040	1,011	986	1,009	986	965	981	962	945
	3	1,088	1,027	979	941	1,068	1,013	969	934	986	949	919	961	930	905	938	912	891
	4	1,041	969	917	877	1,023	958	909	871	936	894	861	915	880	851	896	866	842
	5	996	917	862	822	980	908	856	818	890	845	811	873	834	804	857	824	797
	6	954	871	814	774	940	863	810	771	848	801	766	834	793	761	820	784	756
	7	915	828	772	732	902	821	768	730	809	761	726	797	754	723	786	748	719
	8	878	789	733	695	866	783	730	693	773	725	690	762	719	688	753	714	685
	9	844	753	698	661	833	749	696	660	739	691	658	731	687	656	722	683	654
	10	811	721	666	630	802	716	665	630	708	661	628	701	657	626	694	654	625

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	69.6 fc	3.8 ft
6.5 ft	49.8 fc	4.5 ft
7.5 ft	37.4 fc	5.2 ft
8.0 ft	32.9 fc	5.5 ft
10.0 ft	21.0 fc	6.9 ft
12.0 ft	14.6 fc	8.3 ft
14.0 ft	10.7 fc	9.7 ft
16.0 ft	8.2 fc	11.0 ft
20.0 ft	5.3 fc	13.8 ft
24.0 ft	3.7 fc	16.6 ft
28.0 ft	2.7 fc	19.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	721,000	721,000	721,000
45.00°	14,243	14,522	14,851
55.00°	7,442	7,096	8,035
65.00°	7,019	6,804	7,845
75.00°	7,078	8,153	6,583
85.00°	3,937	5,466	3,182

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	10.1	11.1	10.5	11.4	11.7	10.5	11.5	10.9	11.8	12.1
	3H	12.0	12.9	12.4	13.2	13.6	12.2	13.1	12.6	13.4	13.8
	4H	12.7	13.5	13.1	13.9	14.3	12.9	13.7	13.3	14.0	14.4
	6H	13.1	13.9	13.6	14.2	14.6	13.3	14.0	13.7	14.3	14.7
	8H	13.2	13.9	13.6	14.3	14.7	13.3	13.9	13.7	14.3	14.7
	12H	13.2	13.9	13.7	14.2	14.7	13.3	13.9	13.7	14.3	14.7
4H	2H	10.6	11.4	11.0	11.8	12.1	10.9	11.7	11.3	12.1	12.5
	3H	12.8	13.5	13.2	13.9	14.3	12.8	13.5	13.2	13.9	14.3
	4H	13.6	14.2	14.1	14.6	15.1	13.6	14.2	14.1	14.6	15.1
	6H	14.2	14.6	14.6	15.1	15.6	14.1	14.6	14.5	15.0	15.5
	8H	14.3	14.7	14.7	15.2	15.6	14.1	14.6	14.6	15.0	15.5
	12H	14.3	14.7	14.8	15.2	15.6	14.1	14.5	14.6	15.0	15.5
8H	4H	14.0	14.4	14.5	14.9	15.4	13.7	14.2	14.2	14.6	15.1
	6H	14.6	15.0	15.2	15.5	16.0	14.2	14.6	14.8	15.1	15.6
	8H	14.8	15.1	15.3	15.6	16.1	14.3	14.6	14.8	15.1	15.6
	12H	14.9	15.2	15.4	15.7	16.2	14.4	14.6	14.9	15.1	15.7
12H	4H	14.0	14.4	14.5	14.9	15.3	13.7	14.1	14.2	14.6	15.0
	6H	14.7	15.0	15.2	15.5	16.0	14.2	14.5	14.8	15.0	15.6
	8H	14.9	15.1	15.4	15.6	16.2	14.3	14.6	14.8	15.1	15.7

Corrected UGR values based on total output lumens

SHR = 1.0