

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03RMx xx 835 020 DLWFGP MW
Nominal 3" diam round recessed Infinium downlight

Test Number

SP-00761_2

Test Date

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

Summary of Results

Power

Input Watts	15 W
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Lumen Output

Output Lumens	1228
Efficacy	81.89 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.95
Two luminaires, plane 90°	0.95
Four luminaires	0.89

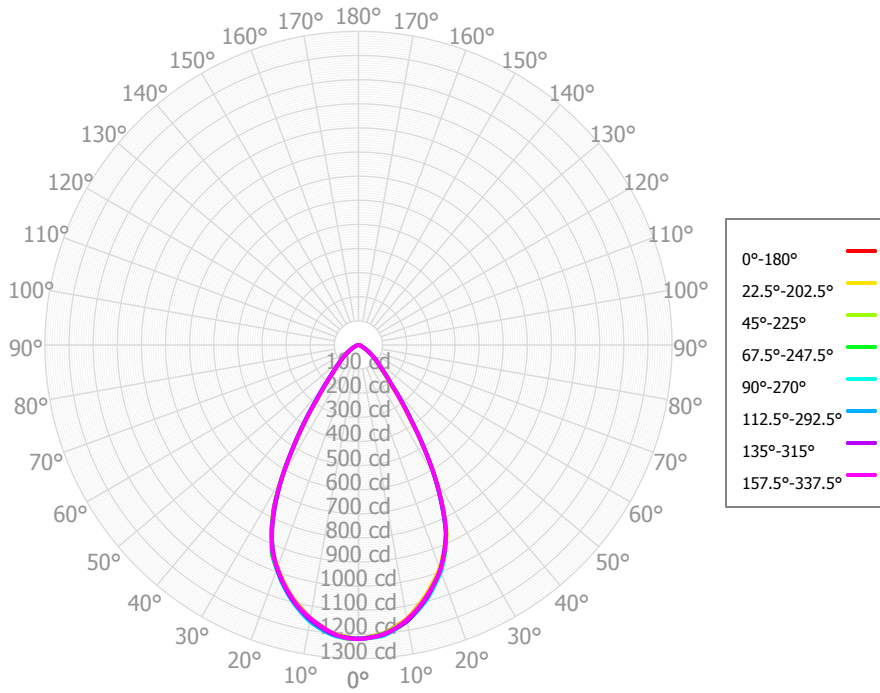
Full Beam Angle

0° - 180°	61°
90° - 270°	61°

IES File Header Contents

Keyword	Value
TEST	SP-00761_2
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/8/2019
UPDATE	2/28/2019
LUMCAT	IF03RMx xx 835 020 DLWFGP MW
LUMINAIRE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 61 degrees
OTHER	Wide 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
_CRI	80
_CCTMULT	40K x 1.03
_LAMPMULT	07L x 0.40, 10L x 0.56, 15L x 0.78

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	114.93	9.36%	90.00° - 100.00°	0.07	0.01%
10.00° - 20.00°	302.85	24.66%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	381.78	31.08%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	244.46	19.90%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	104.91	8.54%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	51.99	4.23%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	19.92	1.62%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	5.90	0.48%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.51	0.12%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1,228.25	99.99%	0.00° - 180.00°	1,228.32	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°	1,218.23	1,218.23	1,218.23	1,218.23	1,218.23	1,218.23	1,218.23	1,218.23	1,218.23	1,218.23	1,218.23	1,218.23	1,218.23	1,218.23	1,218.23	1,218.23	1,218.23
2.50°	1,210.39	1,210.62	1,210.72	1,214.05	1,215.36	1,215.32	1,212.97	1,216.08	1,211.40	1,211.25	1,211.58	1,218.10	1,215.75	1,214.28	1,212.96	1,214.46	1,210.39
5.00°	1,199.67	1,199.29	1,200.25	1,200.91	1,209.52	1,205.38	1,204.32	1,199.92	1,201.23	1,199.11	1,201.89	1,204.98	1,208.96	1,205.95	1,205.38	1,202.31	1,199.67
7.50°	1,177.04	1,178.66	1,179.64	1,184.34	1,186.57	1,187.36	1,181.43	1,177.83	1,176.33	1,178.63	1,181.97	1,188.43	1,188.28	1,187.55	1,184.41	1,183.96	1,177.04
10.00°	1,153.38	1,151.76	1,157.07	1,159.67	1,162.82	1,161.03	1,156.28	1,149.89	1,150.09	1,150.50	1,156.91	1,158.04	1,164.57	1,163.11	1,162.76	1,155.68	1,153.38
12.50°	1,115.10	1,115.42	1,119.46	1,129.36	1,128.99	1,127.10	1,121.33	1,120.13	1,114.55	1,116.10	1,120.31	1,125.20	1,127.86	1,128.19	1,125.68	1,122.02	1,115.10
15.00°	1,076.17	1,073.97	1,079.93	1,088.51	1,094.43	1,086.88	1,083.71	1,078.75	1,077.26	1,075.50	1,080.15	1,083.56	1,088.56	1,088.17	1,087.97	1,081.38	1,076.17
17.50°	1,032.45	1,029.53	1,035.10	1,045.25	1,047.69	1,041.90	1,037.40	1,034.59	1,031.71	1,030.71	1,033.64	1,040.96	1,040.90	1,042.19	1,040.19	1,038.07	1,032.45
20.00°	986.16	983.77	989.89	998.28	998.89	989.17	986.95	983.72	983.53	980.84	984.09	989.78	988.79	993.95	990.80	991.96	986.16
22.50°	927.21	923.53	928.78	936.74	932.57	931.70	926.13	931.74	926.34	928.18	930.10	938.11	925.71	927.82	927.91	931.86	927.21
25.00°	858.24	858.31	865.75	856.98	859.49	847.90	851.05	847.36	856.31	848.81	855.79	850.19	849.29	856.41	857.83	859.42	858.24
27.50°	752.34	751.67	754.15	756.01	748.88	751.08	747.53	759.77	751.80	757.79	757.14	760.32	746.51	747.95	748.46	756.74	752.34
30.00°	637.96	634.39	640.65	633.18	634.62	632.75	634.57	633.18	637.40	636.54	640.48	633.89	634.37	631.34	634.87	632.41	637.96
32.50°	500.03	502.68	505.74	508.68	506.11	505.92	506.33	504.79	502.26	504.89	506.28	508.30	507.19	507.31	505.06	505.39	500.03
35.00°	375.16	368.22	376.39	382.76	386.51	394.83	390.22	389.42	380.33	387.18	388.28	391.12	392.18	382.18	384.14	376.80	375.16
37.50°	278.54	279.10	283.36	286.35	293.41	288.49	289.99	277.13	280.46	273.11	283.51	281.61	292.96	295.63	289.80	283.99	278.54
40.00°	201.88	195.50	200.08	210.31	214.65	220.80	215.02	216.15	204.71	211.56	212.16	217.98	217.22	212.49	210.84	208.17	201.88
42.50°	160.64	158.79	161.00	162.16	169.38	161.84	167.33	158.60	162.44	159.74	162.91	161.07	166.96	171.11	167.48	163.38	160.64
45.00°	127.71	124.92	126.16	129.73	131.76	132.21	131.52	131.66	129.34	132.08	130.48	131.99	130.82	131.48	131.50	130.09	127.71
47.50°	106.64	105.03	105.66	106.34	108.29	107.21	106.30	106.25	106.59	107.36	107.00	105.75	107.14	109.26	109.06	108.24	106.64
50.00°	87.55	85.52	86.26	87.06	87.75	88.56	87.09	89.36	87.56	89.08	87.91	88.59	87.71	87.41	88.48	89.66	87.55
52.50°	70.77	70.85	69.70	71.56	71.62	70.50	72.23	73.01	71.95	71.21	70.73	72.29	71.32	70.73	70.72	73.29	70.77
55.00°	56.33	56.38	54.97	57.39	57.07	57.85	58.35	58.76	58.22	57.99	57.41	58.10	56.83	54.69	55.52	57.39	56.33
57.50°	44.17	43.98	43.98	45.42	44.46	45.45	45.06	45.57	45.93	44.93	45.40	45.25	43.48	43.65	43.43	45.01	44.17
60.00°	33.94	32.43	33.51	34.05	34.42	36.05	34.91	35.63	35.64	34.84	36.10	34.96	33.95	33.15	33.34	33.11	33.94
62.50°	25.23	26.44	23.87	26.03	26.94	26.88	26.26	26.58	26.59	25.12	27.48	25.89	26.22	25.45	25.25	24.95	25.23
65.00°	18.78	20.26	16.87	18.68	20.42	21.18	19.53	19.62	19.44	19.24	19.97	18.77	20.55	18.53	18.25	17.10	18.78
67.50°	13.78	13.32	13.37	13.51	14.69	15.79	13.49	14.17	13.21	13.85	12.66	13.42	15.60	14.38	12.18	12.65	13.78
70.00°	10.24	8.18	10.43	8.78	10.43	11.84	9.36	10.95	9.28	10.29	9.42	9.88	11.06	10.57	8.81	8.64	10.24
72.50°	7.27	6.54	7.95	7.13	6.95	8.70	6.00	7.75	6.17	7.47	6.58	7.48	7.12	7.30	6.79	6.87	7.27
75.00°	5.41	5.24	6.07	5.33	5.33	6.58	4.79	4.78	4.89	5.44	4.57	5.42	5.05	5.40	4.98	5.03	5.41
77.50°	3.87	4.03	4.38	3.30	3.98	4.46	3.54	4.03	3.49	3.90	3.99	3.17	3.90	4.08	3.48	3.15	3.87
80.00°	2.71	2.34	2.86	2.32	2.83	2.82	2.44	2.59	2.36	2.43	2.94	2.76	2.77	2.77	2.45	2.33	2.71
82.50°	1.50	1.69	1.82	1.66	1.97	1.75	1.65	1.51	1.67	1.50	1.60	1.80	1.59	1.62	1.62	1.76	1.50
85.00°	1.22	1.19	1.23	1.47	1.29	1.25	1.20	1.19	1.00	1.34	1.15	1.14	1.18	1.23	1.52	1.08	1.22
87.50°	0.98	0.98	0.81	0.95	1.27	1.21	1.55	0.95	1.06	0.93	1.01	1.13	1.32	1.06	1.04	1.00	0.98
90.00°	0.90	0.96	1.30	0.99	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18	1.21	0.75	0.90
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	1,462	1,462	1,462	1,462	1,428	1,428	1,428	1,428	1,365	1,365	1,365	1,307	1,307	1,307	1,253	1,253	1,228
	1	1,388	1,351	1,318	1,288	1,357	1,324	1,295	1,268	1,274	1,251	1,229	1,228	1,210	1,192	1,186	1,171	1,157
	2	1,312	1,247	1,193	1,148	1,284	1,226	1,177	1,135	1,185	1,145	1,110	1,148	1,115	1,086	1,114	1,087	1,066
	3	1,239	1,154	1,088	1,035	1,214	1,136	1,076	1,027	1,103	1,052	1,010	1,073	1,030	994	1,045	1,009	978
	4	1,170	1,070	997	941	1,147	1,056	988	935	1,029	971	924	1,004	954	913	981	938	903
	5	1,106	996	919	862	1,085	984	912	858	962	899	850	941	886	843	921	873	835
	6	1,047	929	851	794	1,028	919	845	792	900	835	786	883	825	780	866	815	775
	7	991	870	791	736	974	861	787	734	845	778	730	830	770	726	816	762	722
	8	940	816	738	684	925	809	735	683	795	728	680	782	721	677	770	715	674
	9	893	768	691	639	879	761	688	638	749	682	636	738	677	633	728	672	631
	10	849	724	649	599	837	718	646	598	708	642	596	698	637	594	689	633	592

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	40.3 fc	6.5 ft
6.5 ft	28.8 fc	7.7 ft
7.5 ft	21.7 fc	8.8 ft
8.0 ft	19.0 fc	9.4 ft
10.0 ft	12.2 fc	11.8 ft
12.0 ft	8.5 fc	14.1 ft
14.0 ft	6.2 fc	16.5 ft
16.0 ft	4.8 fc	18.9 ft
20.0 ft	3.0 fc	23.6 ft
24.0 ft	2.1 fc	28.3 ft
28.0 ft	1.6 fc	33.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	417,398	417,398	417,398
45.00°	61,881	61,131	63,843
55.00°	33,649	32,833	34,090
65.00°	15,223	13,674	16,557
75.00°	7,164	8,031	7,056
85.00°	4,809	4,839	5,055

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	18.3	19.4	18.6	19.7	20.0	18.4	19.5	18.8	19.8	20.1
	3H	18.5	19.5	18.9	19.8	20.2	18.8	19.7	19.1	20.0	20.4
	4H	18.6	19.5	19.0	19.8	20.2	18.8	19.7	19.2	20.0	20.4
	6H	18.5	19.4	19.0	19.7	20.1	18.8	19.6	19.2	19.9	20.3
	8H	18.5	19.3	18.9	19.7	20.1	18.7	19.5	19.2	19.9	20.3
	12H	18.5	19.2	18.9	19.6	20.0	18.7	19.4	19.1	19.8	20.2
4H	2H	18.3	19.2	18.7	19.5	19.9	18.5	19.3	18.9	19.7	20.1
	3H	18.6	19.3	19.0	19.7	20.1	18.9	19.6	19.3	20.0	20.4
	4H	18.7	19.3	19.1	19.7	20.2	19.0	19.6	19.4	20.0	20.5
	6H	18.7	19.2	19.1	19.7	20.1	19.0	19.5	19.4	20.0	20.4
	8H	18.6	19.2	19.1	19.6	20.1	18.9	19.5	19.4	19.9	20.4
	12H	18.6	19.1	19.1	19.5	20.0	18.9	19.4	19.4	19.8	20.3
8H	4H	18.6	19.1	19.1	19.6	20.0	18.9	19.4	19.3	19.8	20.3
	6H	18.6	19.0	19.1	19.5	20.0	18.9	19.3	19.4	19.8	20.3
	8H	18.6	19.0	19.1	19.5	20.0	18.9	19.3	19.4	19.8	20.3
	12H	18.6	18.9	19.1	19.4	20.0	18.9	19.2	19.4	19.7	20.3
12H	4H	18.5	19.0	19.0	19.5	19.9	18.8	19.3	19.3	19.7	20.2
	6H	18.6	18.9	19.1	19.4	19.9	18.8	19.2	19.4	19.7	20.2
	8H	18.6	18.9	19.1	19.4	20.0	18.9	19.2	19.4	19.7	20.3

Corrected UGR values based on total output lumens

SHR = 1.0