

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-00758_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	1341
Efficacy	89.42 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

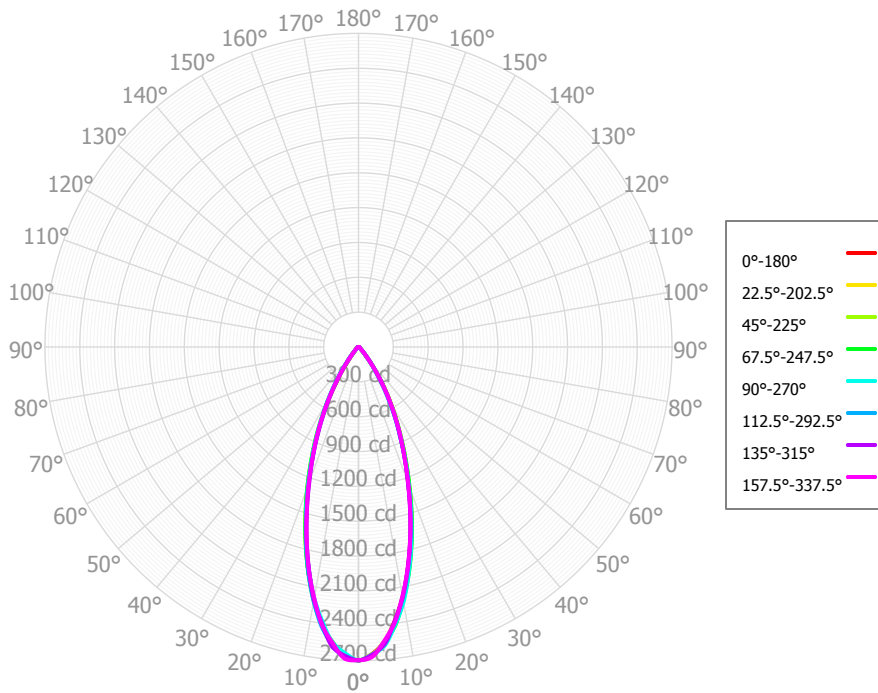
Full Beam Angle

0° - 180°	38°
90° - 270°	38°

IES File Header Contents

Keyword	Value
TEST	SP-00758_2
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/8/2019
UPDATE	2/27/2019
LUMCAT	IF03RMx xx 835 020 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
_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°	235.57	17.56%	90.00° - 100.00°	0.08	0.01%
10.00° - 20.00°	475.98	35.48%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	389.97	29.07%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	165.93	12.37%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	36.80	2.74%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	16.61	1.24%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	11.80	0.88%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	6.88	0.51%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.75	0.13%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1,341.27	99.99%	0.00° - 180.00°	1,341.36	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°	2,697.87	2,697.87	2,697.87	2,697.87	2,697.87	2,697.87	2,697.87	2,697.87	2,697.87	2,697.87	2,697.87	2,697.87	2,697.87	2,697.87	2,697.87	2,697.87	2,697.87
2.50°	2,647.56	2,661.37	2,648.74	2,665.05	2,651.66	2,678.81	2,662.47	2,687.58	2,658.62	2,671.75	2,651.16	2,664.45	2,640.33	2,663.80	2,653.78	2,672.62	2,647.56
5.00°	2,550.38	2,543.48	2,571.11	2,557.74	2,582.95	2,576.95	2,592.15	2,558.97	2,570.14	2,560.00	2,572.74	2,551.67	2,557.57	2,549.86	2,570.41	2,542.08	2,550.38
7.50°	2,382.13	2,396.04	2,400.81	2,420.17	2,413.25	2,429.01	2,403.88	2,414.92	2,401.82	2,417.09	2,404.77	2,412.60	2,384.01	2,394.66	2,384.72	2,394.18	2,382.13
10.00°	2,186.30	2,192.45	2,217.31	2,216.58	2,231.49	2,224.09	2,211.97	2,195.52	2,206.22	2,210.71	2,220.28	2,208.49	2,196.64	2,189.79	2,190.82	2,178.85	2,186.30
12.50°	1,959.19	1,975.96	1,989.68	2,000.75	1,995.80	1,993.93	1,969.03	1,971.50	1,973.91	1,988.67	1,991.48	1,991.31	1,968.64	1,967.88	1,954.95	1,957.38	1,959.19
15.00°	1,722.83	1,739.22	1,758.57	1,763.36	1,756.96	1,745.91	1,725.83	1,724.42	1,735.20	1,744.74	1,758.56	1,754.60	1,737.83	1,729.27	1,718.04	1,718.11	1,722.83
17.50°	1,486.65	1,503.51	1,517.39	1,525.00	1,507.94	1,491.64	1,479.74	1,478.06	1,489.49	1,497.04	1,516.74	1,515.25	1,500.61	1,491.63	1,477.25	1,481.57	1,486.65
20.00°	1,250.52	1,269.12	1,276.69	1,285.28	1,260.40	1,258.99	1,238.73	1,253.83	1,261.02	1,273.70	1,284.89	1,288.98	1,271.40	1,254.77	1,245.69	1,251.36	1,250.52
22.50°	1,048.70	1,056.80	1,068.62	1,066.49	1,051.07	1,032.13	1,031.69	1,032.94	1,048.34	1,052.92	1,070.22	1,063.67	1,057.12	1,043.68	1,040.02	1,039.28	1,048.70
25.00°	852.12	867.28	863.99	872.14	845.31	841.20	830.92	846.23	851.44	858.17	866.18	868.68	857.56	849.73	847.33	860.57	852.12
27.50°	694.99	696.99	702.57	694.70	675.10	657.12	659.08	663.20	666.29	664.84	676.90	675.22	680.01	679.60	683.47	691.51	694.99
30.00°	541.34	543.31	543.75	533.57	509.75	505.73	495.58	502.73	499.48	500.30	504.37	513.94	518.87	522.18	529.03	536.72	541.34
32.50°	400.64	402.23	403.72	391.20	375.32	358.47	360.09	351.54	343.68	338.64	351.27	356.70	377.63	387.64	391.46	395.01	400.64
35.00°	261.20	269.98	271.61	263.54	250.48	253.82	239.71	241.32	229.78	229.83	230.90	246.67	260.23	263.07	271.71	269.48	261.20
37.50°	174.80	174.62	178.36	171.58	167.29	152.10	158.68	145.72	136.61	127.65	141.47	144.16	167.05	178.80	177.62	172.94	174.80
40.00°	92.21	100.12	98.36	102.62	96.38	104.80	94.31	97.43	87.51	87.81	85.33	95.17	104.35	108.11	109.05	105.56	92.21
42.50°	63.85	61.67	65.11	62.83	64.62	59.30	64.51	58.65	55.52	52.10	54.75	52.55	66.84	72.20	71.17	63.78	63.85
45.00°	37.69	39.95	38.42	38.34	39.29	43.78	42.49	43.49	41.15	40.25	37.50	40.09	44.13	45.03	45.86	42.93	37.69
47.50°	29.21	29.07	29.60	27.31	30.26	29.25	33.34	31.96	31.99	30.01	28.77	29.43	31.32	33.10	32.85	30.35	29.21
50.00°	21.62	22.11	22.26	21.85	23.08	25.66	26.21	27.77	26.50	26.22	23.30	24.93	24.42	24.00	24.62	23.40	21.62
52.50°	18.61	19.29	18.09	18.95	19.59	22.22	21.81	23.93	21.84	22.60	19.49	21.00	20.81	20.72	20.21	19.63	18.61
55.00°	15.97	17.61	15.23	16.88	17.24	19.70	18.68	20.64	20.01	19.48	17.93	18.61	18.08	18.12	17.69	17.61	15.97
57.50°	14.67	15.89	14.62	15.34	16.74	17.31	16.96	17.93	18.62	16.74	17.29	16.09	15.75	16.05	16.41	15.92	14.67
60.00°	13.40	14.15	13.54	13.93	15.61	15.53	15.26	15.96	16.69	14.92	15.04	13.31	14.15	14.00	15.06	14.37	13.40
62.50°	12.23	13.03	11.79	13.21	13.65	13.81	13.56	13.98	14.71	13.25	12.28	11.28	12.79	13.48	13.68	13.71	12.23
65.00°	11.10	11.99	10.76	12.60	12.41	12.29	11.71	11.99	11.88	11.87	11.30	10.52	11.66	12.93	12.27	13.36	11.10
67.50°	10.05	10.71	10.55	10.89	11.93	10.83	9.75	10.18	9.31	10.27	10.72	9.66	10.59	11.57	10.86	12.18	10.05
70.00°	9.13	9.38	9.83	9.11	10.33	9.51	8.23	8.51	8.76	8.41	8.38	8.69	9.75	10.15	10.47	10.80	9.13
72.50°	8.36	7.68	8.73	7.85	7.97	8.04	6.82	7.15	7.47	7.51	6.34	7.86	8.71	8.48	10.29	8.58	8.36
75.00°	6.85	6.48	7.90	6.61	6.38	6.52	5.26	5.82	5.29	6.66	4.97	6.73	7.10	7.21	8.65	6.55	6.85
77.50°	5.03	6.03	6.65	5.38	4.74	5.63	3.72	4.39	4.27	4.75	3.99	4.27	5.64	6.28	6.71	5.04	5.03
80.00°	3.30	4.53	4.09	3.88	2.78	3.45	2.50	2.83	2.97	2.70	2.97	2.80	3.62	4.79	4.44	3.63	3.30
82.50°	1.97	2.69	2.62	2.32	1.39	1.57	1.69	1.78	1.69	1.42	1.77	1.52	1.68	2.48	2.15	2.12	1.97
85.00°	1.28	1.43	1.78	1.42	1.04	1.30	1.18	1.18	0.99	1.13	1.52	1.07	1.27	1.39	1.38	1.17	1.28
87.50°	1.08	1.53	1.31	1.32	0.94	1.10	1.00	0.95	1.18	1.02	1.31	1.25	1.06	1.48	1.28	1.09	1.08
90.00°	1.05	1.22	1.21	1.33	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52	1.03	1.44	1.05
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.

	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%
RCR	0	1,597	1,597	1,597	1,597	1,560	1,560	1,560	1,560	1,490	1,490	1,490	1,427	1,427	1,427	1,369	1,369	1,341
	1	1,528	1,493	1,461	1,433	1,495	1,464	1,436	1,410	1,410	1,387	1,367	1,360	1,342	1,326	1,314	1,301	1,275
	2	1,460	1,399	1,349	1,307	1,431	1,376	1,331	1,293	1,333	1,296	1,264	1,294	1,264	1,237	1,257	1,233	1,209
	3	1,395	1,316	1,255	1,207	1,369	1,298	1,242	1,197	1,264	1,217	1,178	1,232	1,193	1,160	1,202	1,170	1,148
	4	1,335	1,243	1,175	1,124	1,311	1,228	1,165	1,117	1,200	1,146	1,104	1,173	1,128	1,091	1,149	1,111	1,090
	5	1,277	1,176	1,106	1,053	1,257	1,164	1,098	1,049	1,141	1,084	1,040	1,119	1,070	1,031	1,099	1,056	1,037
	6	1,224	1,116	1,044	992	1,205	1,106	1,038	989	1,087	1,027	982	1,069	1,016	976	1,052	1,006	988
	7	1,173	1,062	989	938	1,156	1,053	985	936	1,037	976	931	1,021	967	927	1,007	959	922
	8	1,126	1,012	940	890	1,111	1,004	936	889	991	929	885	978	922	882	965	915	878
	9	1,082	966	895	847	1,068	960	892	846	948	886	843	937	881	841	926	875	838
	10	1,040	924	854	808	1,028	919	852	807	908	847	805	899	843	803	889	838	801

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	89.2 fc	3.8 ft
6.5 ft	63.9 fc	4.5 ft
7.5 ft	48.0 fc	5.2 ft
8.0 ft	42.2 fc	5.5 ft
10.0 ft	27.0 fc	6.9 ft
12.0 ft	18.7 fc	8.3 ft
14.0 ft	13.8 fc	9.7 ft
16.0 ft	10.5 fc	11.0 ft
20.0 ft	6.7 fc	13.8 ft
24.0 ft	4.7 fc	16.6 ft
28.0 ft	3.4 fc	19.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	924,360	924,360	924,360
45.00°	18,260	18,618	19,039
55.00°	9,541	9,098	10,301
65.00°	8,999	8,723	10,058
75.00°	9,074	10,453	8,440
85.00°	5,047	7,008	4,080

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	11.0	11.9	11.3	12.2	12.6	11.4	12.3	11.7	12.6	13.0
	3H	12.9	13.7	13.3	14.1	14.4	13.1	13.9	13.5	14.3	14.6
	4H	13.6	14.4	14.0	14.7	15.1	13.8	14.5	14.2	14.9	15.3
	6H	14.0	14.7	14.4	15.1	15.5	14.1	14.8	14.5	15.2	15.6
	8H	14.1	14.7	14.5	15.1	15.5	14.1	14.8	14.6	15.2	15.6
	12H	14.1	14.7	14.5	15.1	15.5	14.1	14.8	14.6	15.2	15.6
4H	2H	11.5	12.3	11.9	12.6	13.0	11.8	12.6	12.2	12.9	13.3
	3H	13.7	14.3	14.1	14.7	15.1	13.7	14.3	14.1	14.7	15.1
	4H	14.5	15.1	14.9	15.5	15.9	14.5	15.0	14.9	15.5	15.9
	6H	15.0	15.5	15.5	16.0	16.4	14.9	15.4	15.4	15.9	16.3
	8H	15.1	15.6	15.6	16.0	16.5	15.0	15.4	15.4	15.9	16.3
	12H	15.2	15.5	15.6	16.0	16.5	15.0	15.4	15.5	15.9	16.3
8H	4H	14.8	15.3	15.3	15.8	16.2	14.6	15.0	15.1	15.5	16.0
	6H	15.5	15.9	16.0	16.4	16.9	15.1	15.5	15.6	16.0	16.5
	8H	15.7	16.0	16.2	16.5	17.0	15.2	15.5	15.7	16.0	16.5
	12H	15.8	16.0	16.3	16.5	17.1	15.2	15.5	15.8	16.0	16.6
12H	4H	14.8	15.2	15.3	15.7	16.2	14.5	14.9	15.0	15.4	15.9
	6H	15.5	15.9	16.1	16.3	16.9	15.1	15.4	15.6	15.9	16.4
	8H	15.7	16.0	16.3	16.5	17.1	15.2	15.5	15.7	16.0	16.5

Corrected UGR values based on total output lumens

SHR = 1.0