

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

IF03SMx xx 835 020 DLFLGP MW
Nom 3" Square Infinium recessed downlight

Test Number

SP-00762_2

Test Date

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

Summary of Results

Power

Input Watts	15 W
-------------	------

Lumen Output

Output Lumens	898
Efficacy	59.84 lm/W

Luminous Dimensions

0° - 180° Size	0.16
90° - 270° Size	0.16
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.65
Two luminaires, plane 90°	0.65
Four luminaires	0.69

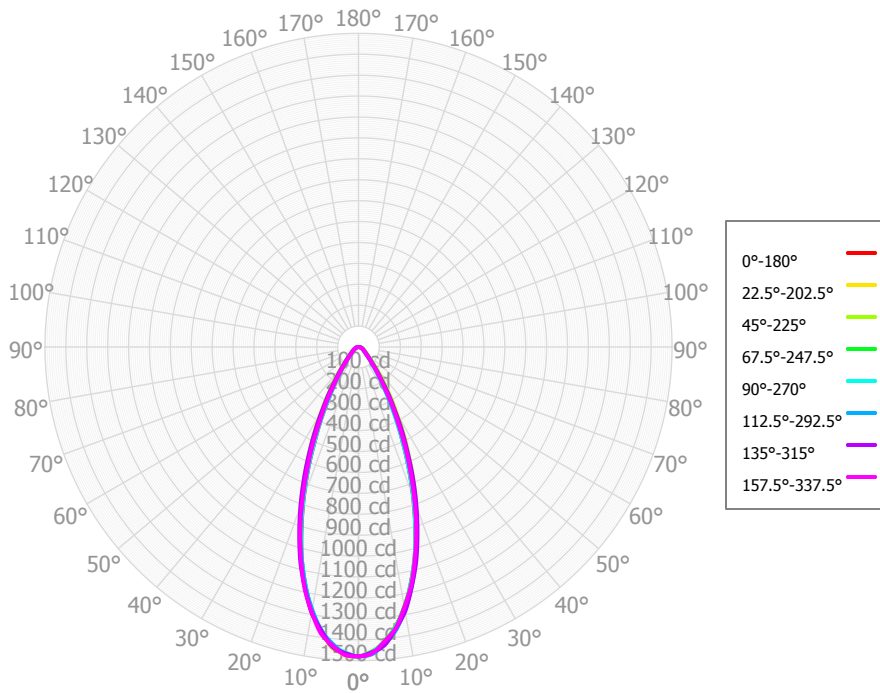
Full Beam Angle

0° - 180°	41°
90° - 270°	41°

IES File Header Contents

Keyword	Value
TEST	SP-00762_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	2/28/2019
LUMCAT	IF03SMx xx 835 020 DLFLGP MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 41 degrees
OTHER	Flood optic, Solite Lens
OTHER	Aluminum bezel contains lens
LAMPCAT	N/A
LAMP	N/A, CRI: 80, Philips
OTHER	CCT Multiplier: 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80
_LAMPMULT	07L x 0.40, 10L x 0.56, 15L x 0.78
_CCTMULT	40K x 1.03

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	133.04	14.82%	90.00° - 100.00°	0.07	0.01%
10.00° - 20.00°	287.28	32.00%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	240.93	26.84%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	118.10	13.16%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	52.65	5.87%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	30.48	3.40%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	20.95	2.33%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	11.77	1.31%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.39	0.27%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	897.60	99.99%	0.00° - 180.00°	897.67	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°	1,480.00	1,480.00	1,480.00	1,480.00	1,480.00	1,480.00	1,480.00	1,480.00	1,480.00	1,480.00	1,480.00	1,480.00	1,480.00	1,480.00	1,480.00	1,480.00	1,480.00
2.50°	1,461.05	1,466.38	1,457.01	1,461.21	1,459.68	1,471.17	1,466.08	1,475.08	1,468.76	1,476.60	1,464.32	1,469.60	1,462.59	1,471.21	1,462.23	1,467.57	1,461.05
5.00°	1,426.18	1,414.40	1,427.23	1,414.32	1,422.49	1,425.20	1,438.38	1,432.71	1,442.44	1,429.31	1,440.24	1,428.94	1,431.49	1,425.41	1,432.07	1,415.39	1,426.18
7.50°	1,350.67	1,355.73	1,350.53	1,351.51	1,353.55	1,369.18	1,367.27	1,382.02	1,368.07	1,377.21	1,365.30	1,372.46	1,364.13	1,367.59	1,360.01	1,358.72	1,350.67
10.00°	1,269.52	1,260.83	1,272.57	1,261.75	1,267.92	1,275.81	1,290.40	1,287.91	1,291.05	1,280.21	1,287.05	1,281.25	1,279.88	1,276.90	1,285.22	1,263.90	1,269.52
12.50°	1,156.66	1,161.11	1,163.84	1,160.76	1,158.93	1,174.84	1,183.24	1,187.56	1,170.62	1,180.49	1,177.05	1,177.01	1,169.20	1,176.08	1,175.59	1,166.55	1,156.66
15.00°	1,039.22	1,040.51	1,053.97	1,043.15	1,038.22	1,050.32	1,071.68	1,060.41	1,048.89	1,050.37	1,064.71	1,053.15	1,047.75	1,051.56	1,064.94	1,042.95	1,039.22
17.50°	901.82	916.81	929.29	918.95	903.31	922.17	941.57	930.02	906.92	919.52	936.23	923.07	910.10	922.74	937.54	918.55	901.82
20.00°	764.82	782.02	804.99	786.32	766.25	785.34	811.35	788.44	765.14	782.68	808.03	787.77	766.93	785.24	810.12	785.52	764.82
22.50°	629.26	650.96	684.12	657.85	626.90	647.53	680.73	650.57	627.24	646.49	681.25	651.11	629.66	650.97	681.92	652.91	629.26
25.00°	501.11	530.86	565.62	534.07	499.82	524.27	555.04	523.30	491.68	525.36	558.40	529.75	494.03	522.29	555.18	531.24	501.11
27.50°	395.16	418.92	461.95	424.04	384.27	402.11	443.47	405.92	385.13	406.89	451.90	411.62	385.35	406.12	447.16	411.82	395.16
30.00°	299.17	327.71	362.97	327.64	292.30	313.41	340.99	313.00	283.16	320.22	351.87	320.94	283.01	308.88	342.28	321.48	299.17
32.50°	228.15	247.35	286.94	249.91	219.58	225.92	261.12	231.78	218.31	237.26	274.05	234.81	216.74	228.87	264.24	235.16	228.15
35.00°	167.86	190.26	216.60	188.28	165.63	177.31	192.05	175.07	158.00	184.74	204.67	182.00	157.12	171.69	190.60	182.25	167.86
37.50°	130.34	142.40	168.85	143.03	125.15	129.47	145.74	128.44	124.43	135.58	159.68	133.18	123.40	127.36	144.91	132.62	130.34
40.00°	98.96	111.44	126.25	110.38	96.63	103.25	107.56	99.84	93.66	106.95	120.49	106.53	93.23	97.80	103.38	103.86	98.96
42.50°	79.05	86.10	100.27	87.51	75.62	77.87	83.99	76.36	76.23	81.00	95.34	81.67	75.46	75.94	82.00	77.58	79.05
45.00°	62.37	69.87	77.79	71.15	61.03	64.86	65.11	60.99	60.40	67.69	74.08	66.18	58.96	61.86	62.66	63.29	62.37
47.50°	50.86	56.80	64.83	58.65	49.92	52.28	53.69	48.93	50.68	55.20	60.96	51.12	49.48	50.61	51.38	50.83	50.86
50.00°	42.33	48.16	53.37	48.37	42.31	43.97	44.74	41.42	41.65	45.88	49.62	44.90	40.43	41.88	41.73	45.42	42.33
52.50°	37.91	41.10	45.41	41.58	36.34	36.23	39.16	35.36	34.74	37.74	41.52	38.77	35.57	35.76	37.37	39.90	37.91
55.00°	34.06	35.97	38.57	36.57	31.70	32.34	34.22	31.04	28.75	33.33	34.81	33.45	30.80	31.66	33.12	34.02	34.06
57.50°	30.90	32.06	33.97	32.75	27.59	28.68	30.03	28.07	25.20	28.95	30.26	28.29	27.20	28.34	29.20	29.04	30.90
60.00°	27.60	29.48	30.27	29.44	24.49	26.22	26.21	26.54	22.35	24.66	26.63	26.04	23.68	25.56	25.72	26.48	27.60
62.50°	24.16	26.84	28.12	26.35	21.72	23.58	22.79	23.36	21.07	20.95	24.28	23.68	21.95	23.39	23.27	24.02	24.16
65.00°	21.91	24.15	25.73	23.35	20.23	20.17	19.50	18.67	19.03	18.54	21.68	20.35	20.19	21.60	20.58	21.79	21.91
67.50°	20.76	21.91	22.98	21.09	19.10	17.29	16.33	16.00	15.69	16.20	18.81	17.22	18.16	19.32	17.42	19.46	20.76
70.00°	18.60	20.01	20.44	19.04	16.52	15.64	13.88	14.59	13.34	13.95	15.49	14.89	15.95	16.82	15.15	16.98	18.60
72.50°	15.83	17.14	18.10	15.97	13.75	13.76	11.80	11.91	11.76	12.02	11.97	12.43	13.37	14.56	13.95	14.66	15.83
75.00°	12.39	13.90	15.05	12.96	11.15	11.63	10.69	8.93	8.53	10.01	10.44	9.84	10.45	11.90	12.66	12.48	12.39
77.50°	9.05	10.37	11.69	10.18	7.99	7.22	8.37	5.73	5.93	6.79	8.31	7.02	7.44	7.86	10.93	9.33	9.05
80.00°	6.11	7.55	7.95	6.18	4.67	4.68	5.26	4.09	4.05	4.35	5.53	4.57	4.58	5.45	7.61	6.49	6.11
82.50°	3.33	4.54	4.45	3.18	2.73	3.18	2.59	2.40	2.05	3.04	2.68	2.56	2.16	3.32	3.75	3.82	3.33
85.00°	1.25	1.72	2.07	1.48	1.24	1.71	1.39	1.17	1.10	1.53	1.42	1.23	1.17	1.65	1.80	1.45	1.25
87.50°	1.09	1.21	1.03	1.50	0.96	1.27	1.07	1.00	0.98	1.12	1.14	1.05	1.18	1.14	1.39	1.23	1.09
90.00°	0.90	0.97	1.08	1.28	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	1.33	0.99	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	1,069	1,069	1,069	1,069	1,044	1,044	1,044	1,044	997	997	997	955	955	955	916	916	898
	1	1,016	990	967	945	994	970	949	930	934	917	902	900	887	875	870	859	842
	2	964	919	881	850	944	903	869	840	874	846	822	847	824	804	822	804	788
	3	916	857	811	775	898	844	802	768	820	785	756	799	769	744	778	754	739
	4	871	802	752	714	854	792	745	709	772	733	701	754	720	693	738	709	695
	5	829	754	701	663	814	745	696	660	729	687	654	714	677	648	700	668	656
	6	790	711	658	619	777	704	654	617	690	646	613	678	639	609	666	632	621
	7	754	672	619	582	742	666	616	580	655	610	577	644	604	574	634	598	588
	8	721	637	585	549	710	632	582	548	623	577	545	613	573	543	605	568	559
	9	690	606	554	519	680	601	552	519	593	548	517	585	544	515	578	541	532
	10	661	577	527	493	653	573	525	492	566	522	491	559	519	490	553	515	508

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	48.9 fc	4.1 ft
6.5 ft	35.0 fc	4.9 ft
7.5 ft	26.3 fc	5.6 ft
8.0 ft	23.1 fc	6.0 ft
10.0 ft	14.8 fc	7.5 ft
12.0 ft	10.3 fc	9.0 ft
14.0 ft	7.6 fc	10.4 ft
16.0 ft	5.8 fc	11.9 ft
20.0 ft	3.7 fc	14.9 ft
24.0 ft	2.6 fc	17.9 ft
28.0 ft	1.9 fc	20.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	622,287	622,287	622,287
45.00°	37,087	46,256	36,291
55.00°	24,967	28,273	23,235
65.00°	21,801	25,602	20,128
75.00°	20,129	24,455	18,111
85.00°	6,029	10,000	5,981

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	18.4	19.5	18.8	19.8	20.1	17.9	19.0	18.3	19.3	19.6
	3H	20.3	21.3	20.7	21.6	22.0	19.5	20.5	19.9	20.8	21.2
	4H	21.0	21.9	21.4	22.2	22.6	20.2	21.0	20.6	21.4	21.8
	6H	21.4	22.2	21.8	22.5	22.9	20.4	21.2	20.8	21.6	22.0
	8H	21.4	22.2	21.8	22.6	23.0	20.4	21.2	20.9	21.6	22.0
	12H	21.4	22.1	21.8	22.5	22.9	20.4	21.1	20.9	21.5	22.0
4H	2H	19.0	19.9	19.4	20.3	20.6	18.4	19.3	18.8	19.6	20.0
	3H	21.1	21.8	21.5	22.2	22.6	20.2	20.9	20.6	21.4	21.8
	4H	21.9	22.6	22.4	23.0	23.4	20.9	21.6	21.4	22.0	22.5
	6H	22.4	22.9	22.8	23.4	23.9	21.3	21.8	21.7	22.3	22.8
	8H	22.4	23.0	22.9	23.4	23.9	21.3	21.8	21.8	22.3	22.8
	12H	22.4	22.9	22.9	23.4	23.9	21.3	21.8	21.8	22.2	22.7
8H	4H	22.2	22.7	22.7	23.2	23.6	21.1	21.6	21.6	22.1	22.6
	6H	22.8	23.2	23.3	23.7	24.2	21.5	21.9	22.0	22.4	22.9
	8H	22.9	23.3	23.4	23.8	24.3	21.6	22.0	22.1	22.5	23.0
	12H	22.9	23.2	23.4	23.7	24.3	21.6	21.9	22.1	22.4	23.0
12H	4H	22.2	22.6	22.7	23.1	23.6	21.1	21.5	21.6	22.0	22.5
	6H	22.8	23.1	23.3	23.6	24.2	21.5	21.9	22.0	22.3	22.9
	8H	22.9	23.3	23.5	23.8	24.3	21.6	21.9	22.1	22.4	23.0

Corrected UGR values based on total output lumens

SHR = 1.0