

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 DLSPGP MW
Nom 3" Square Infinium recessed downlight

Test Number

SP-00764_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	936
Efficacy	62.43 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.42
Two luminaires, plane 90°	0.44
Four luminaires	0.47

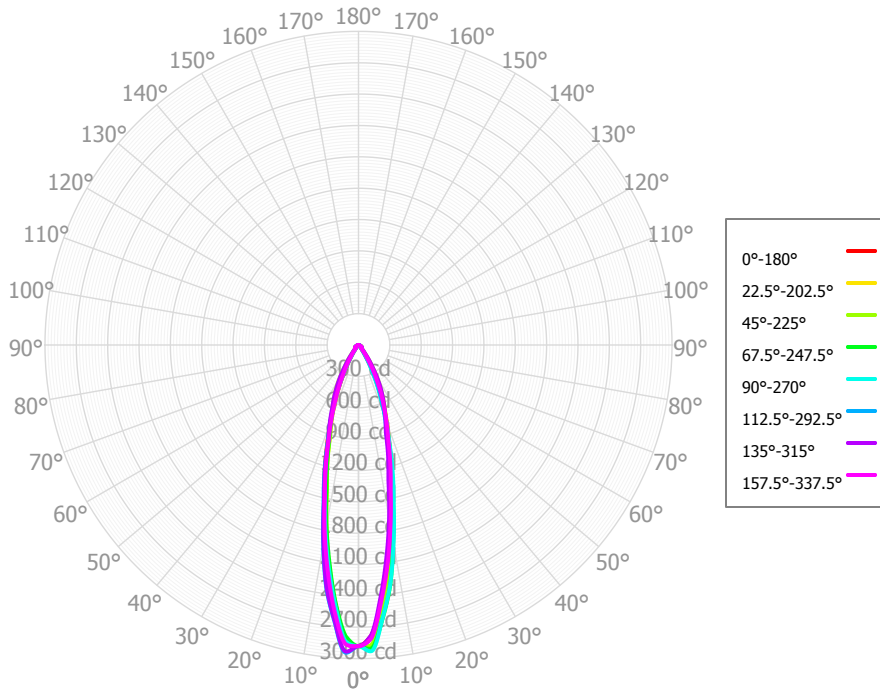
Full Beam Angle

0° - 180°	25°
90° - 270°	26°

IES File Header Contents

Keyword	Value
TEST	SP-00764_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 DLSPGP MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 25 degrees
OTHER	Narrow 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°	221.00	23.60%	90.00° - 100.00°	0.12	0.01%
10.00° - 20.00°	328.62	35.09%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	220.70	23.57%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	76.65	8.19%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	25.62	2.74%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	31.46	3.36%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	21.03	2.25%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	9.22	0.99%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.99	0.21%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	936.30	99.99%	0.00° - 180.00°	936.42	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°	2,881.39	2,881.39	2,881.39	2,881.39	2,881.39	2,881.39	2,881.39	2,881.39	2,881.39	2,881.39	2,881.39	2,881.39	2,881.39	2,881.39	2,881.39	2,881.39	2,881.39
2.50°	2,783.16	2,887.20	2,870.94	2,904.68	2,930.80	2,944.99	2,934.18	2,863.74	2,858.23	2,849.33	2,844.78	2,791.04	2,838.82	2,804.61	2,780.93	2,810.54	2,783.16
5.00°	2,474.66	2,538.16	2,551.86	2,631.78	2,628.27	2,651.59	2,641.36	2,577.87	2,556.61	2,494.55	2,511.85	2,488.19	2,515.97	2,459.01	2,423.14	2,469.74	2,474.66
7.50°	2,091.41	2,186.01	2,186.73	2,321.44	2,316.52	2,352.27	2,340.37	2,218.80	2,237.00	2,139.53	2,170.67	2,117.29	2,165.82	2,100.90	2,049.06	2,123.85	2,091.41
10.00°	1,763.82	1,822.93	1,798.65	1,908.80	1,930.27	1,944.79	1,927.37	1,854.45	1,866.36	1,769.66	1,777.53	1,764.32	1,823.12	1,745.76	1,686.65	1,759.64	1,763.82
12.50°	1,454.41	1,460.10	1,407.37	1,526.86	1,554.69	1,544.35	1,523.29	1,488.75	1,522.36	1,402.51	1,403.57	1,417.43	1,481.21	1,390.74	1,324.91	1,421.77	1,454.41
15.00°	1,205.98	1,213.22	1,148.25	1,227.33	1,265.30	1,256.04	1,235.09	1,208.86	1,251.18	1,152.55	1,143.49	1,158.95	1,224.11	1,140.50	1,094.25	1,175.01	1,205.98
17.50°	977.48	966.81	907.62	959.13	984.83	974.23	957.75	949.81	995.56	904.90	903.12	929.37	975.24	893.53	870.48	947.33	977.48
20.00°	781.76	799.88	773.72	773.50	771.44	795.91	807.60	759.01	780.93	742.75	773.22	758.23	786.18	740.88	756.46	785.68	781.76
22.50°	596.34	633.45	653.75	603.32	565.98	620.67	660.98	584.79	583.43	581.84	648.19	605.83	602.67	591.18	647.33	631.55	596.34
25.00°	445.51	504.10	549.99	472.43	416.20	488.77	553.80	448.67	431.12	460.87	550.50	472.22	453.89	467.54	548.28	502.48	445.51
27.50°	305.13	375.22	448.20	349.27	274.24	359.03	446.99	321.40	294.50	340.93	451.56	344.52	308.18	344.51	449.64	379.09	305.13
30.00°	206.56	273.39	344.63	245.42	187.21	258.04	344.10	228.48	197.83	247.58	345.95	244.72	213.01	248.23	346.75	274.23	206.56
32.50°	120.62	172.48	240.85	155.93	107.39	160.63	243.81	143.16	118.27	155.83	245.70	153.35	121.88	152.38	243.69	179.30	120.62
35.00°	77.52	116.00	167.43	101.71	75.12	108.32	168.94	95.23	80.70	105.83	172.48	101.07	83.79	105.16	173.17	116.07	77.52
37.50°	46.83	60.62	97.44	58.68	46.07	59.06	98.42	55.58	50.39	57.48	105.86	60.37	49.71	58.73	103.59	63.74	46.83
40.00°	34.30	44.11	66.75	42.19	36.94	44.62	68.59	40.40	37.89	44.74	72.48	42.89	38.15	44.26	74.93	44.90	34.30
42.50°	26.81	28.06	40.15	30.06	28.92	31.33	41.33	30.38	28.26	32.53	43.86	32.16	28.20	30.08	47.46	30.02	26.81
45.00°	24.88	26.61	34.66	28.05	27.85	30.48	37.12	27.98	25.42	30.08	38.06	30.80	27.23	29.94	40.71	27.09	24.88
47.50°	24.50	25.36	31.35	27.58	27.50	29.92	33.68	27.11	24.86	28.10	34.15	32.06	26.83	29.82	34.41	26.18	24.50
50.00°	28.75	29.95	33.70	30.61	31.36	32.28	36.63	31.00	29.54	34.71	39.14	35.30	31.50	32.90	37.42	31.20	28.75
52.50°	34.23	34.37	36.58	32.98	34.58	34.49	39.32	35.85	33.70	40.81	42.82	39.09	36.47	35.96	40.56	35.14	34.23
55.00°	35.64	34.65	35.13	33.87	34.23	35.30	39.99	37.46	36.65	38.65	40.56	37.36	35.71	34.68	37.67	36.04	35.64
57.50°	35.99	34.69	33.29	33.18	33.41	35.59	39.85	38.46	37.27	36.22	37.56	34.16	34.62	33.36	34.70	35.29	35.99
60.00°	32.48	29.83	28.69	29.00	29.98	31.12	33.38	33.32	32.72	29.86	31.38	29.15	31.92	28.48	28.72	29.93	32.48
62.50°	27.99	24.99	23.86	24.93	26.41	26.54	26.93	27.09	27.85	23.70	25.26	23.67	29.14	23.61	22.73	24.78	27.99
65.00°	23.17	20.78	19.71	21.13	22.18	20.99	20.60	21.14	22.33	19.93	19.40	20.90	24.17	19.45	18.21	20.24	23.17
67.50°	18.27	16.85	15.68	17.82	18.33	16.06	14.88	15.23	17.56	16.30	14.67	18.78	19.23	15.48	13.91	16.26	18.27
70.00°	15.52	14.52	13.60	15.29	15.64	13.73	11.48	12.36	14.01	13.38	12.89	14.76	16.04	13.00	11.71	13.33	15.52
72.50°	13.01	11.93	11.41	12.17	12.73	11.11	9.12	9.75	10.63	10.86	10.72	10.86	12.78	10.91	9.91	10.87	13.01
75.00°	10.69	8.95	8.93	8.74	9.57	8.16	7.96	7.60	7.43	8.89	8.19	8.11	9.36	9.45	8.79	8.74	10.69
77.50°	7.52	6.21	6.11	5.95	6.38	5.92	5.86	5.33	5.75	5.99	5.62	5.38	6.48	7.15	6.79	6.89	7.52
80.00°	4.58	4.29	3.72	3.84	3.98	4.06	4.28	3.19	4.21	3.77	3.83	3.31	3.91	4.48	4.70	5.08	4.58
82.50°	2.87	3.09	2.29	2.28	2.30	2.46	2.97	1.69	2.50	2.40	2.48	2.58	1.93	2.01	2.79	3.14	2.87
85.00°	0.91	1.75	1.41	1.17	1.24	1.26	1.47	1.45	1.22	1.22	1.15	1.57	1.24	1.22	1.33	1.35	0.91
87.50°	0.99	1.02	1.28	1.00	1.02	1.12	1.02	1.19	1.10	0.95	0.83	0.99	1.27	1.07	0.91	0.97	0.99
90.00°	1.02	0.99	1.13	1.01	0.88	0.91	1.05	1.06	0.80	0.66	0.75	0.78	0.91	0.65	0.81	0.99	1.02
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%	20%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	1,115	1,115	1,115	1,115	1,089	1,089	1,089	1,089	1,040	1,040	1,040	996	996	996	955	955	955	936
	1	1,065	1,040	1,018	998	1,042	1,020	1,000	982	982	967	952	948	935	924	916	906	897	888
	2	1,017	974	939	909	997	958	926	899	928	902	879	901	879	861	875	858	843	841
	3	973	917	874	840	955	904	865	833	880	847	820	858	830	807	837	814	795	799
	4	932	867	820	784	915	857	813	780	837	800	771	819	787	762	802	775	753	761
	5	894	823	774	738	879	815	769	735	799	759	729	784	749	722	770	740	716	727
	6	858	784	735	699	846	777	731	697	764	723	692	751	715	688	740	708	683	696
	7	826	749	700	665	814	743	697	664	732	690	660	722	685	657	712	679	654	668
	8	795	718	669	635	785	713	666	634	703	661	632	694	657	629	686	652	627	642
	9	767	689	641	609	758	685	639	608	677	635	606	669	631	604	662	627	602	618
	10	741	663	616	585	733	659	614	584	652	611	582	645	608	581	639	604	580	596

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	95.3 fc	2.5 ft
6.5 ft	68.2 fc	2.9 ft
7.5 ft	51.2 fc	3.4 ft
8.0 ft	45.0 fc	3.6 ft
10.0 ft	28.8 fc	4.5 ft
12.0 ft	20.0 fc	5.4 ft
14.0 ft	14.7 fc	6.4 ft
16.0 ft	11.3 fc	7.3 ft
20.0 ft	7.2 fc	9.1 ft
24.0 ft	5.0 fc	10.9 ft
28.0 ft	3.7 fc	12.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1,211,524	1,211,524	1,211,524
45.00°	14,797	20,607	16,562
55.00°	26,124	25,753	25,094
65.00°	23,049	19,611	22,064
75.00°	17,373	14,513	15,545
85.00°	4,393	6,800	6,005

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	19.3	20.3	19.7	20.6	20.9	19.2	20.2	19.6	20.5	20.9
	3H	20.3	21.2	20.7	21.5	21.9	20.3	21.2	20.7	21.6	21.9
	4H	20.7	21.5	21.1	21.9	22.3	20.6	21.5	21.0	21.8	22.2
	6H	20.9	21.6	21.3	22.0	22.4	20.7	21.5	21.2	21.9	22.3
	8H	20.9	21.6	21.3	22.0	22.4	20.7	21.5	21.2	21.9	22.3
	12H	20.9	21.6	21.3	21.9	22.4	20.7	21.4	21.1	21.8	22.2
4H	2H	19.5	20.3	19.9	20.7	21.0	19.4	20.3	19.9	20.6	21.0
	3H	20.7	21.3	21.1	21.8	22.2	20.7	21.4	21.1	21.8	22.2
	4H	21.1	21.7	21.6	22.2	22.6	21.1	21.7	21.5	22.1	22.6
	6H	21.4	21.9	21.9	22.4	22.9	21.2	21.8	21.7	22.2	22.7
	8H	21.4	21.9	21.9	22.4	22.9	21.2	21.7	21.7	22.2	22.7
	12H	21.4	21.8	21.9	22.3	22.8	21.2	21.7	21.7	22.1	22.6
8H	4H	21.2	21.7	21.7	22.1	22.6	21.1	21.6	21.6	22.0	22.5
	6H	21.5	21.9	22.0	22.4	22.9	21.3	21.7	21.8	22.2	22.7
	8H	21.6	22.0	22.1	22.5	23.0	21.4	21.7	21.9	22.2	22.7
	12H	21.6	21.9	22.2	22.4	23.0	21.4	21.7	21.9	22.2	22.7
12H	4H	21.1	21.6	21.6	22.1	22.5	21.1	21.5	21.5	22.0	22.4
	6H	21.5	21.8	22.0	22.3	22.9	21.3	21.6	21.8	22.1	22.7
	8H	21.6	21.9	22.1	22.4	23.0	21.4	21.7	21.9	22.2	22.7

Corrected UGR values based on total output lumens

SHR = 1.0