

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Fall River, MA 02721
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Spectrum Lighting Photometric Lab

Luminaire

IF03SMxxx835020/DLNFGPMWMF
Nom 3" Square Infinium recessed downlight

Test Number

SP-00763_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	928
Efficacy	61.9 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.51
Two luminaires, plane 90°	0.52
Four luminaires	0.57

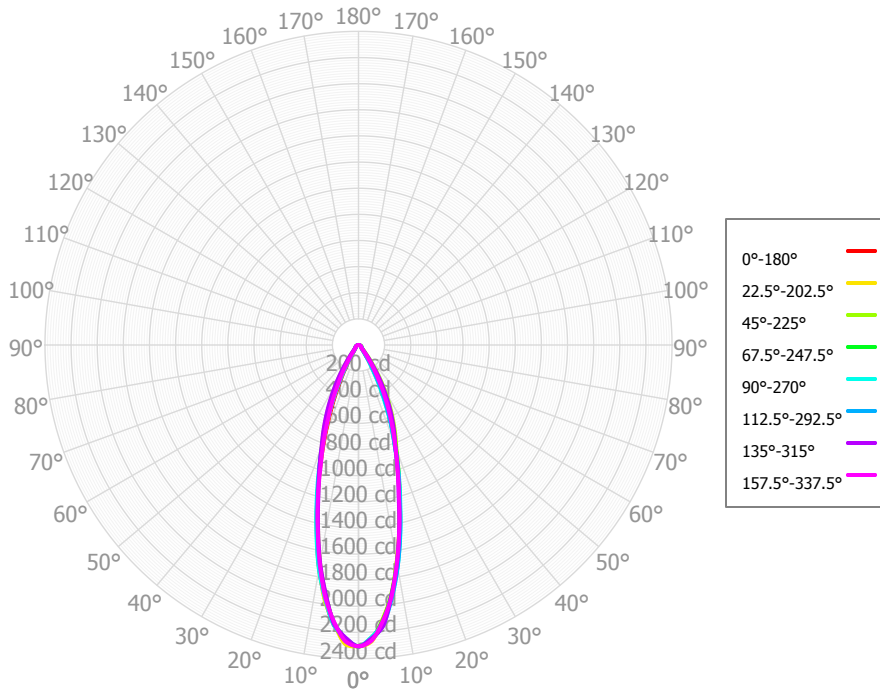
Full Beam Angle

0° - 180°	31°
90° - 270°	32°

IES File Header Contents

Keyword	Value
TEST	SP-00763_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	2/28/2019
LUMCAT	IF03SMxxx835020/DLNFGPMWMF
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 31 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°	191.68	20.65%	90.00° - 100.00°	0.08	0.01%
10.00° - 20.00°	332.79	35.84%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	233.92	25.20%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	85.94	9.26%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	29.50	3.18%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	23.13	2.49%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	19.03	2.05%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	10.11	1.09%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.26	0.24%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	928.35	99.99%	0.00° - 180.00°	928.43	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°	2,306.47	2,306.47	2,306.47	2,306.47	2,306.47	2,306.47	2,306.47	2,306.47	2,306.47	2,306.47	2,306.47	2,306.47	2,306.47	2,306.47	2,306.47	2,306.47	2,306.47
2.50°	2,250.54	2,272.56	2,244.78	2,254.33	2,240.39	2,248.89	2,243.99	2,271.70	2,259.40	2,293.08	2,248.87	2,268.05	2,248.75	2,256.36	2,249.65	2,266.74	2,250.54
5.00°	2,133.19	2,109.03	2,134.35	2,117.55	2,140.35	2,139.65	2,145.34	2,130.36	2,153.07	2,139.36	2,139.63	2,138.09	2,155.37	2,155.23	2,160.69	2,123.49	2,133.19
7.50°	1,936.43	1,932.23	1,924.70	1,934.39	1,939.20	1,934.12	1,922.43	1,949.40	1,961.18	1,975.88	1,926.03	1,952.31	1,958.23	1,954.67	1,931.71	1,942.17	1,936.43
10.00°	1,706.15	1,684.91	1,687.48	1,693.19	1,723.24	1,708.78	1,693.35	1,703.74	1,737.62	1,719.67	1,694.77	1,714.70	1,744.45	1,725.51	1,699.68	1,690.97	1,706.15
12.50°	1,464.05	1,441.10	1,443.71	1,453.49	1,478.90	1,449.78	1,432.05	1,441.31	1,474.38	1,462.75	1,432.72	1,455.18	1,485.93	1,472.45	1,439.71	1,442.83	1,464.05
15.00°	1,218.12	1,210.79	1,198.59	1,215.33	1,232.22	1,209.67	1,186.12	1,198.58	1,219.55	1,215.51	1,194.91	1,214.38	1,237.01	1,214.30	1,185.79	1,199.37	1,218.12
17.50°	1,012.09	996.55	1,019.03	1,010.47	1,020.07	995.45	997.24	959.44	973.53	973.35	991.64	979.92	1,008.54	1,005.06	1,000.01	989.89	1,012.09
20.00°	815.89	828.60	848.26	833.22	809.52	807.80	824.20	779.24	758.80	784.03	819.91	795.96	796.99	803.00	823.84	822.21	815.89
22.50°	651.20	671.15	730.80	678.46	634.75	650.19	697.11	605.81	570.77	601.79	684.67	624.74	614.20	647.91	710.31	672.70	651.20
25.00°	492.08	537.57	617.61	539.27	463.00	504.48	573.40	471.08	415.08	464.68	557.53	485.87	450.42	496.72	597.27	541.36	492.08
27.50°	363.62	412.29	509.36	412.19	331.02	369.87	457.28	338.76	281.80	334.76	438.13	352.71	313.08	373.37	486.41	420.09	363.62
30.00°	238.51	302.24	401.53	291.85	207.22	260.45	347.69	244.67	187.22	236.90	332.20	253.71	205.23	251.72	377.65	307.26	238.51
32.50°	164.03	208.24	303.97	202.34	142.41	170.11	249.75	152.98	114.89	150.34	236.89	158.76	131.16	174.87	276.03	216.02	164.03
35.00°	92.26	137.89	209.07	126.43	85.05	112.52	168.48	107.38	76.80	100.68	164.43	112.07	82.86	101.42	185.72	139.45	92.26
37.50°	67.93	87.60	147.87	85.89	65.17	75.30	111.89	64.60	54.34	61.44	106.54	68.16	58.57	72.91	124.50	91.19	67.93
40.00°	44.59	61.60	91.17	57.91	47.99	54.52	72.11	51.06	43.55	48.68	72.17	54.50	44.43	46.93	76.00	58.41	44.59
42.50°	37.77	44.86	66.18	44.47	40.56	42.06	52.50	38.86	36.90	38.66	49.99	41.31	38.09	39.83	53.15	42.21	37.77
45.00°	31.23	37.36	44.36	34.92	34.27	35.20	39.89	34.97	31.88	34.20	39.34	36.57	33.70	33.34	37.08	33.44	31.23
47.50°	27.37	32.20	37.45	31.48	31.09	30.57	34.22	31.14	27.31	30.51	33.49	32.03	30.54	29.96	32.29	28.93	27.37
50.00°	24.01	28.94	31.98	29.24	28.04	27.80	30.98	27.50	25.60	28.08	30.25	29.40	27.43	26.95	29.25	25.90	24.01
52.50°	23.70	27.38	31.60	27.78	25.28	25.60	29.73	24.61	24.46	26.30	27.84	27.04	24.33	25.29	28.57	25.05	23.70
55.00°	23.37	26.97	30.80	26.43	23.99	25.30	28.65	24.14	24.30	25.37	26.33	26.30	23.05	24.01	27.20	24.77	23.37
57.50°	22.94	26.18	28.89	26.41	25.28	25.44	27.69	23.62	24.26	24.18	25.05	25.48	22.52	23.82	25.08	24.16	22.94
60.00°	22.42	25.18	26.68	26.48	25.45	23.94	25.06	22.95	22.42	22.70	23.42	24.29	21.57	22.82	23.07	23.50	22.42
62.50°	21.62	22.84	23.84	22.68	24.04	22.19	21.54	21.68	20.44	20.48	21.73	22.61	20.49	20.08	21.15	21.80	21.62
65.00°	20.52	19.91	21.10	18.92	21.97	18.51	19.01	19.24	18.25	17.58	18.49	19.39	18.74	17.47	19.01	19.98	20.52
67.50°	18.72	17.78	18.54	17.66	19.10	14.74	16.90	16.12	15.98	15.25	15.15	16.55	16.86	15.09	16.72	17.78	18.72
70.00°	16.18	15.91	16.24	16.11	16.24	13.25	13.81	12.12	13.12	13.26	12.53	14.37	13.63	12.61	14.50	15.55	16.18
72.50°	12.59	13.61	14.22	13.31	13.38	11.39	10.70	9.32	9.93	10.99	10.46	11.96	10.69	10.02	12.31	13.27	12.59
75.00°	10.01	11.39	12.84	11.16	11.13	8.77	8.17	7.14	6.33	8.71	9.24	9.44	8.58	7.98	10.60	10.80	10.01
77.50°	7.93	9.49	11.31	9.62	8.46	6.28	6.14	5.69	4.44	6.52	6.90	7.02	6.49	6.11	8.17	8.10	7.93
80.00°	6.21	6.66	8.31	6.97	4.62	4.29	4.37	3.49	3.41	4.66	4.40	4.08	4.27	4.35	4.66	5.76	6.21
82.50°	3.76	4.11	5.08	3.50	2.30	2.79	2.80	2.07	2.23	2.19	2.38	1.99	2.10	2.31	3.09	3.57	3.76
85.00°	1.67	2.26	2.32	1.28	1.22	1.49	1.73	1.16	1.23	1.57	1.32	1.20	0.99	1.25	1.75	1.68	1.67
87.50°	0.94	1.15	1.09	1.01	1.04	1.21	1.39	1.10	1.24	0.97	1.31	1.13	1.20	1.14	0.68	1.28	0.94
90.00°	1.03	1.14	1.12	1.20	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18	1.32	1.03
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	1,105	1,105	1,105	1,105	1,080	1,080	1,080	1,080	1,032	1,032	1,032	988	988	988	947	947	947	928
	1	1,055	1,030	1,008	988	1,033	1,010	990	972	973	957	942	938	926	914	907	897	888	879
	2	1,007	964	929	899	987	948	916	889	918	892	869	891	869	851	866	848	833	832
	3	962	907	863	829	944	894	854	822	870	837	809	848	820	797	827	804	785	789
	4	921	856	809	773	905	846	802	768	826	789	759	808	776	750	791	764	742	750
	5	882	811	762	726	868	803	757	722	787	747	716	772	737	710	758	728	704	715
	6	846	772	721	686	833	764	717	683	751	710	679	739	702	674	727	695	670	683
	7	813	736	686	651	801	730	682	649	718	676	646	708	670	642	698	665	639	654
	8	782	703	654	620	771	698	651	618	688	646	616	679	641	613	671	637	611	627
	9	753	673	625	592	743	669	623	591	661	619	589	653	615	587	646	611	585	602
	10	725	646	599	567	717	642	597	566	635	594	565	629	590	563	622	587	562	579

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	76.2 fc	3.1 ft
6.5 ft	54.6 fc	3.7 ft
7.5 ft	41.0 fc	4.3 ft
8.0 ft	36.0 fc	4.5 ft
10.0 ft	23.1 fc	5.7 ft
12.0 ft	16.0 fc	6.8 ft
14.0 ft	11.8 fc	8.0 ft
16.0 ft	9.0 fc	9.1 ft
20.0 ft	5.8 fc	11.4 ft
24.0 ft	4.0 fc	13.6 ft
28.0 ft	2.9 fc	15.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	969,791	969,791	969,791
45.00°	18,572	26,379	20,378
55.00°	17,134	22,577	17,584
65.00°	20,415	20,992	21,854
75.00°	16,255	20,856	18,088
85.00°	8,048	11,172	5,876

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	17.0	18.0	17.3	18.3	18.6	17.1	18.1	17.4	18.4	18.7
	3H	19.0	19.9	19.4	20.3	20.6	18.8	19.7	19.2	20.0	20.4
	4H	19.7	20.5	20.1	20.9	21.3	19.4	20.2	19.8	20.6	21.0
	6H	20.1	20.9	20.5	21.3	21.7	19.7	20.5	20.1	20.8	21.2
	8H	20.2	20.9	20.7	21.3	21.7	19.7	20.4	20.2	20.8	21.2
	12H	20.2	20.9	20.7	21.3	21.7	19.7	20.4	20.1	20.8	21.2
4H	2H	17.6	18.4	18.0	18.8	19.2	17.6	18.4	18.0	18.8	19.2
	3H	19.8	20.5	20.3	20.9	21.3	19.5	20.2	19.9	20.6	21.0
	4H	20.6	21.2	21.1	21.7	22.1	20.1	20.7	20.6	21.2	21.6
	6H	21.2	21.7	21.6	22.1	22.6	20.5	21.0	21.0	21.5	22.0
	8H	21.3	21.8	21.8	22.2	22.7	20.5	21.0	21.0	21.5	22.0
	12H	21.3	21.8	21.8	22.2	22.7	20.5	20.9	21.0	21.4	21.9
8H	4H	20.9	21.4	21.4	21.8	22.3	20.3	20.7	20.7	21.2	21.7
	6H	21.6	22.0	22.1	22.5	22.9	20.7	21.1	21.2	21.6	22.1
	8H	21.7	22.1	22.3	22.6	23.1	20.8	21.1	21.3	21.6	22.1
	12H	21.8	22.1	22.4	22.6	23.2	20.8	21.1	21.3	21.6	22.2
12H	4H	20.9	21.3	21.4	21.8	22.3	20.2	20.6	20.7	21.1	21.6
	6H	21.6	21.9	22.1	22.4	23.0	20.7	21.0	21.2	21.5	22.1
	8H	21.8	22.1	22.3	22.6	23.2	20.8	21.1	21.3	21.6	22.2

Corrected UGR values based on total output lumens

SHR = 1.0