

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-00764

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	902
Efficacy	60.15 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.4
Two luminaires, plane 90°	0.41
Four luminaires	0.44

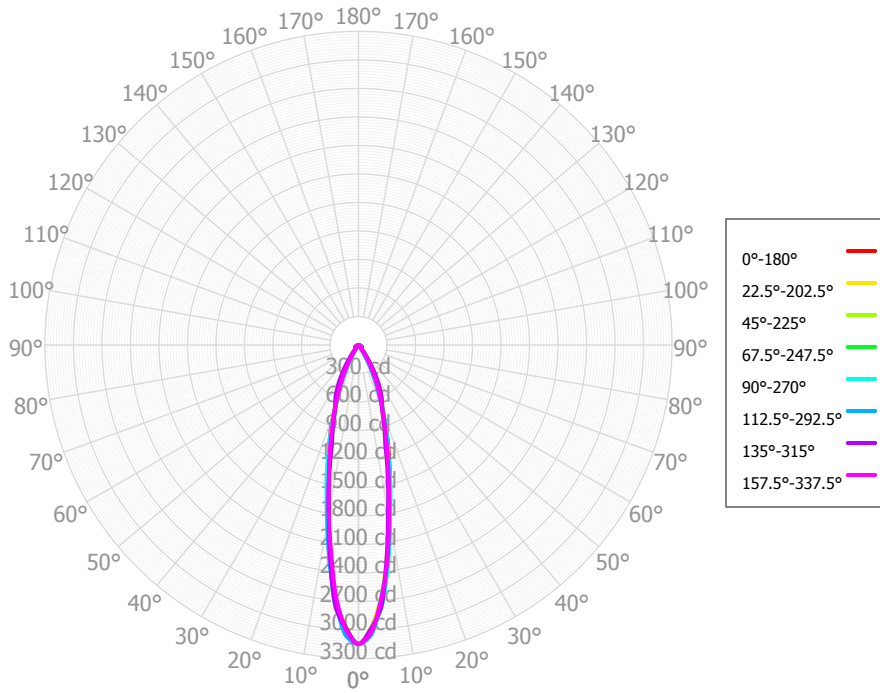
Full Beam Angle

0° - 180°	24°
90° - 270°	25°

IES File Header Contents

Keyword	Value
TEST	SP-00764
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	2/28/2019
LUMCAT	IF03SMx xx 835 020 DLSPGC MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 24 degrees
OTHER	Spot optic, Clear glass 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°	231.52	25.66%	90.00° - 100.00°	0.07	0.01%
10.00° - 20.00°	325.35	36.06%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	210.26	23.30%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	62.20	6.89%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	16.66	1.85%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	30.62	3.39%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	18.18	2.01%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	5.27	0.58%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.11	0.23%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	902.18	99.99%	0.00° - 180.00°	902.25	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°	3,146.63	3,146.63	3,146.63	3,146.63	3,146.63	3,146.63	3,146.63	3,146.63	3,146.63	3,146.63	3,146.63	3,146.63	3,146.63	3,146.63	3,146.63	3,146.63	3,146.63
2.50°	2,990.04	2,993.42	2,985.55	3,046.07	3,006.75	3,062.06	2,992.09	3,004.34	2,982.58	3,016.98	3,002.94	3,040.14	2,997.55	3,054.37	2,993.25	3,029.51	2,990.04
5.00°	2,709.00	2,682.38	2,742.53	2,733.07	2,776.91	2,731.08	2,767.98	2,678.35	2,715.64	2,735.02	2,770.54	2,713.54	2,763.87	2,693.96	2,763.31	2,705.99	2,709.00
7.50°	2,286.35	2,280.07	2,266.69	2,356.15	2,346.67	2,317.22	2,277.37	2,203.64	2,236.20	2,253.71	2,299.72	2,269.07	2,303.89	2,308.39	2,266.13	2,308.81	2,286.35
10.00°	1,825.00	1,827.23	1,812.94	1,890.22	1,893.87	1,883.05	1,788.74	1,802.31	1,818.68	1,826.99	1,801.75	1,864.33	1,877.83	1,871.58	1,790.29	1,841.29	1,825.00
12.50°	1,520.28	1,481.08	1,425.79	1,495.23	1,552.73	1,444.35	1,428.74	1,443.08	1,510.49	1,454.13	1,441.39	1,474.35	1,554.45	1,486.44	1,427.31	1,466.69	1,520.28
15.00°	1,246.11	1,182.53	1,093.63	1,181.62	1,217.45	1,148.64	1,083.70	1,165.35	1,227.09	1,155.03	1,088.94	1,171.06	1,246.53	1,186.67	1,098.50	1,165.29	1,246.11
17.50°	999.01	951.74	889.48	940.10	987.78	874.47	895.47	925.41	979.97	916.02	898.18	892.67	975.38	934.19	900.71	933.02	999.01
20.00°	755.32	744.40	726.47	765.90	761.05	724.30	721.52	735.16	755.48	728.20	713.33	713.89	734.22	745.73	731.90	744.82	755.32
22.50°	582.49	591.99	641.66	615.74	583.12	585.37	639.10	562.85	557.84	574.15	631.57	555.78	550.27	581.09	647.87	595.95	582.49
25.00°	414.79	454.12	550.24	484.38	409.81	464.01	552.05	430.22	394.64	443.71	547.04	425.92	385.41	442.66	555.32	467.47	414.79
27.50°	292.51	340.68	448.75	358.27	279.61	343.47	444.79	308.86	264.73	325.96	435.44	300.06	249.78	314.67	443.42	354.04	292.51
30.00°	173.04	231.94	346.48	235.49	159.12	233.88	338.62	209.44	165.29	225.41	325.74	197.34	145.76	196.16	333.58	246.88	173.04
32.50°	110.37	150.35	243.28	145.44	97.65	128.13	235.99	114.51	90.48	132.29	227.60	96.54	81.48	114.46	227.52	159.97	110.37
35.00°	51.56	72.13	156.99	71.96	45.97	78.61	146.10	72.15	51.81	79.90	138.20	64.79	43.76	60.32	139.19	79.53	51.56
37.50°	37.53	47.15	88.20	40.19	35.28	33.84	88.69	36.85	36.83	41.13	85.64	35.34	33.59	34.40	77.26	48.86	37.53
40.00°	24.84	25.92	48.12	25.61	25.67	26.81	45.85	27.85	27.16	27.98	43.22	28.56	26.39	25.54	38.37	30.22	24.84
42.50°	21.07	21.78	32.19	19.92	19.42	20.45	32.16	20.97	20.27	21.36	32.99	22.08	21.70	20.12	27.29	23.60	21.07
45.00°	17.67	18.05	24.39	17.04	14.79	17.48	23.27	19.28	16.52	18.71	25.01	19.47	18.09	16.37	21.17	19.05	17.67
47.50°	15.95	18.67	22.13	18.51	14.16	16.39	22.15	17.93	14.12	16.78	22.61	17.70	15.24	16.79	20.00	17.68	15.95
50.00°	16.70	20.00	26.31	20.99	16.72	22.36	25.96	23.84	18.83	22.12	24.75	21.99	18.48	18.82	23.26	16.64	16.70
52.50°	25.93	29.48	34.11	27.68	25.47	29.22	36.33	29.95	25.89	28.30	35.73	27.19	25.18	27.10	30.17	26.71	25.93
55.00°	33.79	37.67	37.92	35.07	32.89	38.63	42.44	38.57	34.25	36.45	43.07	36.88	32.27	37.24	36.67	37.33	33.79
57.50°	38.11	37.50	39.93	35.08	38.22	42.70	43.95	44.97	42.93	44.72	44.61	42.65	39.54	37.81	42.90	39.41	38.11
60.00°	38.09	35.33	32.68	34.32	36.79	34.85	37.79	35.70	36.69	36.49	39.98	34.40	35.91	36.26	37.46	40.77	38.09
62.50°	29.08	24.27	22.20	24.40	26.59	26.13	24.79	26.20	27.74	28.02	27.31	25.95	28.40	26.65	25.68	29.06	29.08
65.00°	20.44	14.82	14.77	14.17	18.10	15.85	15.28	15.64	18.26	17.23	16.95	16.97	19.49	15.80	16.58	17.92	20.44
67.50°	12.43	10.56	8.17	10.58	11.41	8.76	8.22	7.63	9.04	7.92	8.90	10.16	10.20	9.85	8.65	11.54	12.43
70.00°	7.59	7.68	5.93	7.31	7.54	5.48	5.33	5.92	6.89	6.44	5.16	6.94	7.33	4.78	5.57	6.45	7.59
72.50°	5.89	7.05	4.49	5.64	5.52	4.78	4.00	5.05	5.56	5.07	3.63	5.26	5.35	4.63	3.82	5.19	5.89
75.00°	5.81	5.90	4.65	4.95	6.11	5.01	4.47	4.82	5.78	3.86	3.26	4.41	4.80	4.35	4.15	5.36	5.81
77.50°	6.20	4.86	4.67	5.22	6.18	4.38	4.40	4.69	4.85	4.01	3.20	3.54	5.06	3.92	4.45	6.38	6.20
80.00°	6.70	5.15	4.36	4.18	4.52	3.98	3.83	3.79	4.16	4.14	3.13	2.90	4.26	3.09	4.44	5.08	6.70
82.50°	4.78	3.25	3.22	2.58	2.82	3.26	2.73	2.59	3.01	3.08	2.20	2.26	2.04	2.13	2.67	3.29	4.78
85.00°	1.91	1.30	1.14	1.24	1.43	1.91	1.42	1.51	1.33	1.10	1.53	1.24	1.15	1.28	1.76	1.67	1.91
87.50°	1.10	1.26	0.77	1.00	1.24	1.33	0.87	1.02	1.57	0.76	1.05	0.78	1.06	0.89	1.37	1.07	1.10
90.00°	1.46	1.02	1.00	0.86	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02	1.22	1.18	1.46
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	1,074	1,074	1,074	1,074	1,049	1,049	1,049	1,049	1,002	1,002	1,002	960	960	960	921	921	921	902
	1	1,028	1,005	984	966	1,006	986	967	950	949	935	921	916	905	894	885	876	868	859
	2	984	944	912	884	965	929	899	874	900	876	855	874	854	837	849	833	819	817
	3	943	892	852	820	926	879	843	813	856	826	800	835	809	788	815	794	776	779
	4	905	845	802	768	890	835	795	764	817	782	755	799	770	746	783	758	738	745
	5	870	805	759	726	856	796	754	722	781	744	716	767	735	710	753	726	704	713
	6	837	768	722	689	825	762	718	687	749	711	682	737	703	678	726	696	674	685
	7	807	736	690	658	796	730	687	656	719	681	653	709	675	649	700	669	646	659
	8	779	706	661	630	769	702	658	628	692	654	626	684	649	623	676	645	621	635
	9	752	679	635	605	743	675	633	604	668	629	602	660	625	600	654	622	598	612
	10	728	655	611	582	720	651	610	582	645	606	580	638	603	579	632	600	577	592

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	104.0 fc	2.4 ft
6.5 ft	74.5 fc	2.8 ft
7.5 ft	55.9 fc	3.2 ft
8.0 ft	49.2 fc	3.5 ft
10.0 ft	31.5 fc	4.3 ft
12.0 ft	21.9 fc	5.2 ft
14.0 ft	16.1 fc	6.1 ft
16.0 ft	12.3 fc	6.9 ft
20.0 ft	7.9 fc	8.7 ft
24.0 ft	5.5 fc	10.4 ft
28.0 ft	4.0 fc	12.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1,323,048	1,323,048	1,323,048
45.00°	10,505	14,502	8,793
55.00°	24,769	27,795	24,110
65.00°	20,340	14,697	18,010
75.00°	9,434	7,557	9,926
85.00°	9,211	5,519	6,922

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	20.1	21.1	20.5	21.4	21.8	20.7	21.7	21.0	22.0	22.3
	3H	20.3	21.2	20.7	21.6	21.9	20.7	21.6	21.1	22.0	22.3
	4H	20.4	21.2	20.8	21.6	22.0	20.7	21.6	21.2	21.9	22.3
	6H	20.6	21.4	21.0	21.7	22.1	20.8	21.6	21.2	21.9	22.3
	8H	20.7	21.4	21.2	21.8	22.2	20.8	21.5	21.3	21.9	22.3
	12H	20.8	21.4	21.2	21.8	22.3	20.8	21.5	21.2	21.9	22.3
4H	2H	20.1	20.9	20.5	21.3	21.7	20.6	21.4	21.0	21.8	22.2
	3H	20.4	21.0	20.8	21.4	21.8	20.7	21.4	21.1	21.8	22.2
	4H	20.5	21.1	20.9	21.5	21.9	20.8	21.4	21.2	21.8	22.2
	6H	20.8	21.4	21.3	21.8	22.3	20.9	21.4	21.4	21.9	22.4
	8H	21.0	21.5	21.5	22.0	22.4	20.9	21.4	21.4	21.9	22.3
	12H	21.1	21.5	21.6	22.0	22.5	20.9	21.4	21.4	21.8	22.3
8H	4H	20.4	20.9	20.9	21.3	21.8	20.7	21.1	21.1	21.6	22.1
	6H	20.9	21.3	21.4	21.8	22.3	20.9	21.2	21.4	21.7	22.2
	8H	21.1	21.5	21.7	22.0	22.5	20.9	21.3	21.5	21.8	22.3
	12H	21.3	21.5	21.8	22.0	22.6	21.0	21.3	21.5	21.8	22.4
12H	4H	20.4	20.8	20.9	21.3	21.7	20.6	21.0	21.1	21.5	22.0
	6H	20.9	21.2	21.4	21.7	22.2	20.8	21.2	21.4	21.6	22.2
	8H	21.2	21.4	21.7	21.9	22.5	20.9	21.2	21.5	21.7	22.3

Corrected UGR values based on total output lumens

SHR = 1.0