

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03RSx IC 835 010 N11 DLSPGN MW

Test Number

SP-00776_1_M-010L

Test Date

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

Summary of Results

Power

Input Watts	7.3 W
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Lumen Output

Output Lumens	787
Efficacy	107.75 lm/W

Luminous Dimensions

0° - 180° Size	-0.2
90° - 270° Size	-0.2
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.38
Two luminaires, plane 90°	0.38
Four luminaires	0.41

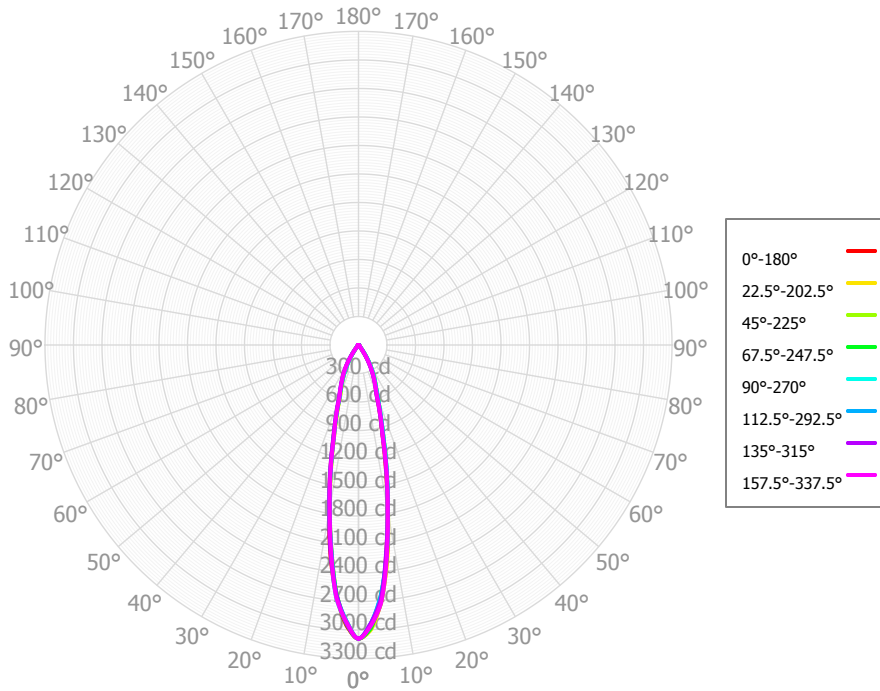
Full Beam Angle

0° - 180°	23°
90° - 270°	23°

IES File Header Contents

Keyword	Value
TEST	SP-00776_1_M-010L
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/8/2019
UPDATE	3/11/2019
LUMCAT	IF03RSx IC 835 010 N11 DLSPGN MW
LUMINIARE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 23 degrees
OTHER	Spot optic, Open aperture / no 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, scaled from 20L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	225.56	28.68%	90.00° - 100.00°	0.05	0.01%
10.00° - 20.00°	284.44	36.16%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	180.32	22.93%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	68.08	8.66%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	7.52	0.96%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	7.52	0.96%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	8.84	1.12%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	3.26	0.41%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.96	0.12%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	786.50	99.99%	0.00° - 180.00°	786.55	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°	3,090.31	3,090.31	3,090.31	3,090.31	3,090.31	3,090.31	3,090.31	3,090.31	3,090.31	3,090.31	3,090.31	3,090.31	3,090.31	3,090.31	3,090.31	3,090.31	3,090.31
2.50°	2,973.07	3,000.46	2,961.28	2,985.92	2,939.10	2,907.59	2,931.51	2,917.65	2,950.65	2,929.57	2,910.99	2,936.30	2,921.93	2,937.89	2,933.77	2,960.24	2,973.07
5.00°	2,719.48	2,714.48	2,724.35	2,661.55	2,667.91	2,647.67	2,644.59	2,673.78	2,654.78	2,638.17	2,661.93	2,637.00	2,676.87	2,659.09	2,690.40	2,726.83	2,719.48
7.50°	2,227.78	2,307.47	2,273.89	2,268.88	2,244.38	2,182.95	2,232.90	2,201.83	2,248.87	2,179.03	2,196.61	2,188.42	2,211.15	2,251.80	2,219.68	2,275.27	2,227.78
10.00°	1,758.10	1,787.35	1,767.31	1,788.68	1,772.09	1,743.12	1,767.46	1,744.11	1,773.33	1,742.14	1,744.45	1,757.98	1,759.67	1,773.92	1,762.89	1,768.37	1,758.10
12.50°	1,329.33	1,357.49	1,366.80	1,366.72	1,381.40	1,356.91	1,381.08	1,358.45	1,373.50	1,333.26	1,357.52	1,344.00	1,363.36	1,371.18	1,345.04	1,362.92	1,329.33
15.00°	968.54	1,016.29	996.31	1,023.28	1,019.03	1,015.74	1,030.82	998.92	1,024.15	993.65	995.45	1,014.97	1,001.44	1,012.01	974.29	985.22	968.54
17.50°	742.82	762.91	770.34	756.51	781.33	777.42	793.76	784.77	775.84	745.74	768.55	767.02	783.79	767.40	744.00	753.40	742.82
20.00°	559.85	600.23	588.28	598.57	589.80	582.26	611.49	587.86	598.49	562.92	561.46	588.80	587.16	592.87	547.45	564.50	559.85
22.50°	466.76	477.65	482.44	474.43	480.82	491.69	498.24	496.96	481.79	470.79	473.21	481.31	486.28	471.59	458.57	459.39	466.76
25.00°	379.27	398.59	401.41	401.40	404.39	405.96	420.32	408.57	409.94	388.54	387.10	387.73	388.53	384.67	372.24	380.71	379.27
27.50°	304.24	319.12	322.87	327.57	330.45	332.66	344.05	337.27	336.78	320.77	315.23	308.97	306.27	303.03	294.65	302.28	304.24
30.00°	227.44	239.17	245.20	252.43	257.56	259.40	268.67	265.01	262.60	248.62	242.95	232.38	225.85	224.99	218.11	223.93	227.44
32.50°	146.44	163.19	170.25	179.99	186.66	186.22	193.91	185.18	186.75	169.69	167.51	158.20	155.48	153.90	145.57	150.91	146.44
35.00°	78.17	91.97	96.30	112.08	116.64	118.54	119.52	108.60	109.52	102.32	95.75	96.74	89.67	87.79	80.53	79.82	78.17
37.50°	41.86	43.21	53.25	58.60	68.48	66.98	67.75	61.48	57.27	53.80	55.24	50.26	51.29	46.45	45.80	42.96	41.86
40.00°	14.29	22.80	22.40	30.69	30.62	25.42	29.62	17.92	26.52	20.19	18.04	21.12	17.33	23.77	16.61	19.24	14.29
42.50°	10.10	9.99	10.56	11.26	13.60	15.22	12.02	11.72	10.23	12.19	13.04	13.48	13.06	12.27	11.69	10.18	10.10
45.00°	6.84	7.28	6.81	7.70	6.96	7.02	7.47	5.96	7.03	6.79	8.36	8.72	9.11	9.63	7.54	7.10	6.84
47.50°	6.22	5.83	5.60	5.50	4.77	5.65	5.43	5.69	5.48	6.12	7.40	7.70	7.69	7.96	7.00	6.09	6.22
50.00°	5.94	6.17	5.55	5.99	4.92	4.79	5.09	5.51	5.50	5.80	6.55	7.37	6.56	7.11	6.69	5.98	5.94
52.50°	6.68	6.72	6.03	6.67	6.04	5.78	5.58	6.81	5.83	6.12	7.11	7.98	7.91	7.49	7.61	6.68	6.68
55.00°	7.86	7.59	6.77	7.78	7.70	7.08	6.65	8.10	6.48	7.40	7.76	9.15	9.31	8.96	8.79	7.75	7.86
57.50°	10.48	8.96	8.70	9.12	9.53	9.59	8.54	9.49	7.84	10.60	10.13	11.13	11.15	10.96	11.42	10.04	10.48
60.00°	12.30	11.10	11.24	11.00	11.46	11.55	11.03	10.79	9.95	12.60	12.31	11.80	12.69	13.43	13.36	12.93	12.30
62.50°	11.28	11.70	11.00	11.63	11.02	11.15	11.24	10.05	10.54	12.01	10.60	10.50	10.61	12.86	10.92	11.76	11.28
65.00°	9.83	9.78	9.26	9.32	9.12	10.38	9.66	9.28	9.46	10.56	8.86	8.61	8.52	9.33	8.50	8.51	9.83
67.50°	6.74	7.65	7.24	7.08	7.59	7.91	7.93	7.05	7.95	7.15	6.65	5.80	6.34	6.55	6.17	6.27	6.74
70.00°	4.03	5.15	5.06	5.01	6.29	5.64	6.06	4.84	5.94	4.37	4.47	3.84	4.23	4.54	3.96	4.58	4.03
72.50°	2.92	3.28	3.81	3.41	5.09	4.34	4.58	3.81	4.47	3.14	3.69	3.32	3.31	3.26	2.82	3.37	2.92
75.00°	2.00	2.54	3.13	3.08	3.96	3.22	3.41	2.80	3.65	2.38	2.92	2.75	2.46	2.75	1.81	2.44	2.00
77.50°	1.92	1.94	2.67	2.66	3.20	2.98	2.90	2.55	2.96	2.73	2.34	2.06	2.27	2.27	1.78	1.79	1.92
80.00°	1.58	1.57	2.35	2.05	2.68	2.45	2.89	2.18	2.39	2.24	1.70	1.41	1.80	1.82	1.62	1.29	1.58
82.50°	0.76	1.05	1.34	1.32	1.58	1.30	1.70	1.35	1.37	0.81	0.87	0.82	0.83	1.08	1.12	0.83	0.76
85.00°	0.60	0.56	0.58	0.59	0.61	0.75	0.74	0.76	0.64	0.61	0.58	0.66	0.47	0.58	0.80	0.71	0.60
87.50°	0.64	0.47	0.68	0.88	0.64	0.49	0.53	0.57	0.56	0.50	0.46	0.63	0.59	0.50	0.81	0.69	0.64
90.00°	0.47	0.54	0.83	0.59	0.62	0.50	0.68	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.47
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%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	936	936	936	936	915	915	915	915	874	874	874	837	837	837	803	803	803	787
	1	900	881	864	849	881	864	849	835	832	820	810	803	794	786	777	770	763	754
	2	864	832	805	783	848	819	795	774	794	774	757	771	755	741	750	737	726	723
	3	831	789	757	731	817	779	749	725	759	734	714	741	720	703	724	707	693	694
	4	800	752	716	689	787	743	711	685	727	700	677	712	689	670	699	679	662	666
	5	772	718	681	654	760	712	677	651	698	669	646	686	660	640	675	653	635	641
	6	745	688	651	624	734	683	647	622	672	641	618	662	634	614	652	628	610	618
	7	719	661	623	597	710	656	621	595	647	616	592	639	611	590	631	606	587	596
	8	695	636	599	573	687	632	597	572	624	593	570	617	589	568	610	585	566	576
	9	673	613	576	552	666	610	575	551	603	571	549	597	568	548	591	565	546	557
	10	652	592	556	532	646	589	555	532	584	552	530	578	549	529	573	547	528	539

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	102.2 fc	2.2 ft
6.5 ft	73.1 fc	2.6 ft
7.5 ft	54.9 fc	3.0 ft
8.0 ft	48.3 fc	3.2 ft
10.0 ft	30.9 fc	4.0 ft
12.0 ft	21.5 fc	4.8 ft
14.0 ft	15.8 fc	5.6 ft
16.0 ft	12.1 fc	6.4 ft
20.0 ft	7.7 fc	8.0 ft
24.0 ft	5.4 fc	9.6 ft
28.0 ft	3.9 fc	11.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1,058,819	1,058,819	1,058,819
45.00°	3,313	3,299	3,373
55.00°	4,693	4,044	4,602
65.00°	7,971	7,511	7,397
75.00°	2,650	4,146	5,244
85.00°	2,371	2,285	2,409

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	9.7	10.6	10.1	10.9	11.3	10.1	11.1	10.5	11.4	11.7
	3H	11.3	12.1	11.6	12.4	12.8	11.7	12.5	12.1	12.8	13.2
	4H	11.4	12.2	11.8	12.6	12.9	12.0	12.8	12.5	13.2	13.6
	6H	11.6	12.3	12.0	12.7	13.1	12.4	13.1	12.8	13.4	13.8
	8H	11.6	12.3	12.0	12.6	13.1	12.4	13.1	12.9	13.5	13.9
	12H	11.6	12.2	12.0	12.6	13.0	12.4	13.1	12.9	13.5	13.9
4H	2H	10.5	11.3	11.0	11.7	12.1	10.9	11.7	11.3	12.0	12.4
	3H	12.0	12.6	12.4	13.0	13.4	12.4	13.0	12.8	13.4	13.9
	4H	12.2	12.8	12.7	13.2	13.7	12.8	13.4	13.3	13.8	14.3
	6H	12.4	12.9	12.9	13.4	13.8	13.2	13.7	13.7	14.2	14.6
	8H	12.5	12.9	12.9	13.4	13.8	13.3	13.8	13.8	14.2	14.7
	12H	12.5	12.8	13.0	13.3	13.8	13.3	13.7	13.8	14.2	14.7
8H	4H	12.3	12.7	12.8	13.2	13.7	12.9	13.4	13.4	13.8	14.3
	6H	12.6	12.9	13.1	13.4	13.9	13.5	13.8	14.0	14.3	14.8
	8H	12.7	13.0	13.2	13.5	14.0	13.6	13.9	14.1	14.4	14.9
	12H	12.7	13.0	13.3	13.5	14.1	13.6	13.9	14.2	14.4	15.0
12H	4H	12.3	12.6	12.8	13.1	13.6	12.9	13.3	13.4	13.8	14.3
	6H	12.6	12.9	13.1	13.4	13.9	13.5	13.8	14.0	14.2	14.8
	8H	12.7	13.0	13.2	13.5	14.1	13.6	13.9	14.2	14.4	15.0

Corrected UGR values based on total output lumens

SHR = 1.0