Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire
IF03RSx IC 835 007 N11 DLSPGP MW

Test Number
SP-00776_2_M-007L

Test Date

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

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Summary of Results

Power

Input Watts	5.4 W

Lumen Output

Output Lumens	546
Efficacy	101.08 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.4
Two luminaires, plane 90°	0.4
Four luminaires	0.43

Full Beam Angle

0° - 180°	24°
90° - 270°	24°

IES File Header Contents

Keyword	Value
TEST	SP-00776_2_M-007L
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/8/2019
UPDATE	3/11/2019
LUMCAT	IF03RSx IC 835 007 N11 DLSPGP MW
LUMINIARE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 24 degrees
OTHER	Spot optic, Solite 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

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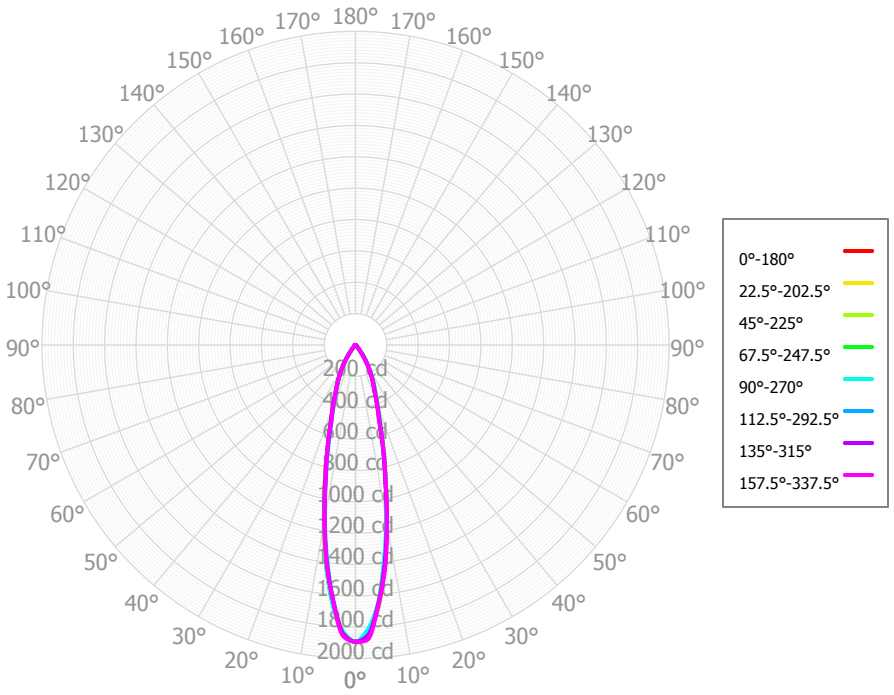
Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	142.33	26.08%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	190.44	34.89%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	125.11	22.92%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	56.25	10.31%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	12.96	2.38%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	9.03	1.66%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	6.10	1.12%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	2.87	0.53%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.68	0.13%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	545.80	99.99%	0.00° - 180.00°	545.83	100.00%

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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°	1,893.27	1,893.27	1,893.27	1,893.27	1,893.27	1,893.27	1,893.27	1,893.27	1,893.27	1,893.27	1,893.27	1,893.27	1,893.27	1,893.27	1,893.27	1,893.27	1,893.27
2.50°	1,843.58	1,853.28	1,828.24	1,829.33	1,815.71	1,843.69	1,842.44	1,856.84	1,834.98	1,851.92	1,828.29	1,842.93	1,830.14	1,864.43	1,852.56	1,877.99	1,843.58
5.00°	1,677.83	1,662.79	1,676.95	1,655.22	1,659.24	1,634.44	1,635.33	1,640.56	1,651.43	1,654.21	1,662.22	1,658.78	1,667.43	1,659.26	1,665.11	1,666.35	1,677.83
7.50°	1,419.91	1,416.86	1,410.14	1,395.27	1,390.04	1,384.09	1,406.66	1,405.26	1,420.61	1,430.43	1,419.52	1,424.76	1,418.22	1,433.37	1,416.94	1,443.16	1,419.91
10.00°	1,155.91	1,152.48	1,148.51	1,138.60	1,130.44	1,128.21	1,137.79	1,141.53	1,144.53	1,152.18	1,141.55	1,142.43	1,133.58	1,147.60	1,148.30	1,156.54	1,155.91
12.50°	887.62	882.69	894.38	884.26	886.01	871.28	894.98	875.96	902.80	899.56	903.73	897.19	892.24	885.07	872.78	885.88	887.62
15.00°	682.62	690.02	684.17	684.39	678.64	684.60	694.89	693.09	689.80	693.04	681.64	683.36	665.89	679.26	674.12	684.28	682.62
17.50°	517.03	516.21	529.35	517.99	522.92	508.42	532.73	513.10	531.06	523.44	531.24	526.38	520.94	506.55	496.93	505.02	517.03
20.00°	407.59	416.96	412.65	410.00	404.57	414.01	424.56	420.85	412.49	412.26	404.48	412.02	399.90	403.90	396.66	404.40	407.59
22.50°	328.41	332.22	338.54	333.07	331.64	328.31	338.64	329.99	330.89	325.15	329.91	331.24	328.55	319.22	314.24	316.51	328.41
25.00°	269.83	275.33	275.96	274.10	270.60	275.62	280.75	275.89	273.10	271.18	269.88	272.35	269.11	267.26	261.87	266.55	269.83
27.50°	220.94	222.72	224.63	223.45	222.36	225.26	227.07	222.18	221.93	221.17	220.92	220.41	219.45	217.60	215.01	217.59	220.94
30.00°	171.78	173.47	175.34	175.49	175.14	177.56	178.04	173.67	174.52	175.97	174.45	172.39	171.70	171.64	168.65	171.17	171.78
32.50°	122.51	124.59	127.78	128.58	128.88	129.94	131.99	126.17	129.91	131.83	129.70	127.77	127.71	127.36	122.36	126.40	122.51
35.00°	84.44	85.89	87.63	89.52	89.56	91.25	88.80	87.76	86.66	88.79	85.26	84.82	84.29	85.42	85.23	85.23	84.44
37.50°	50.18	47.90	53.06	53.12	56.06	53.23	56.76	52.18	57.41	56.67	57.05	55.41	55.83	53.03	49.01	51.67	50.18
40.00°	32.28	32.20	32.30	34.32	34.36	35.86	34.22	34.90	34.10	34.85	31.07	31.72	28.98	32.23	32.53	32.35	32.28
42.50°	19.08	17.32	20.63	20.47	21.25	19.37	21.07	19.83	22.41	21.47	21.65	20.70	19.81	18.71	17.26	18.67	19.08
45.00°	14.39	13.93	14.61	15.45	14.74	15.82	14.92	16.13	14.89	15.06	13.87	14.30	11.90	13.04	13.70	14.26	14.39
47.50°	11.69	10.65	11.85	12.50	12.40	12.54	12.25	13.03	12.57	12.17	12.81	11.74	10.76	10.16	10.49	11.30	11.69
50.00°	10.97	10.47	10.84	11.48	11.34	11.89	11.88	12.39	11.81	11.80	12.16	10.35	9.85	9.90	10.60	10.41	10.97
52.50°	10.62	10.28	10.70	10.81	10.98	11.27	11.69	11.68	11.27	11.11	11.17	9.89	9.79	9.50	10.68	9.88	10.62
55.00°	9.77	9.89	10.44	10.86	11.05	10.84	11.59	10.76	10.78	10.21	10.17	9.67	9.70	8.99	10.10	9.81	9.77
57.50°	8.85	9.46	10.14	11.00	11.33	10.32	10.31	9.68	9.57	9.41	9.40	8.88	8.66	8.37	9.44	9.11	8.85
60.00°	8.15	8.64	8.74	9.49	9.64	9.26	8.45	8.15	8.22	8.67	8.61	7.98	7.64	7.66	7.90	7.72	8.15
62.50°	7.48	7.80	6.95	7.82	7.11	8.07	7.45	6.86	6.91	7.45	7.49	6.94	6.74	6.69	6.43	6.63	7.48
65.00°	6.42	6.92	6.07	6.70	5.98	6.27	6.83	6.16	5.60	6.02	6.32	5.88	5.87	5.55	5.58	5.82	6.42
67.50°	5.34	5.94	5.48	5.62	5.34	4.78	5.58	5.23	4.85	4.74	4.74	5.15	5.12	4.73	4.76	5.01	5.34
70.00°	4.34	4.52	4.36	4.39	4.28	4.10	4.14	3.92	4.10	3.50	3.53	4.37	4.23	4.05	4.10	4.21	4.34
72.50°	3.49	3.51	3.18	3.37	3.15	3.52	3.57	3.10	3.10	2.98	3.12	3.21	3.10	3.50	3.52	3.36	3.49
75.00°	3.08	3.11	2.64	3.09	2.67	3.04	3.05	2.60	2.20	2.48	2.35	2.36	2.69	2.87	3.06	2.54	3.08
77.50°	2.38	2.27	1.95	2.37	2.19	2.38	2.56	2.39	1.49	2.00	1.60	1.78	2.26	1.90	2.09	1.92	2.38
80.00°	1.54	1.48	1.13	1.43	1.69	1.55	1.65	1.69	1.39	1.17	1.20	1.36	1.33	1.41	1.27	1.35	1.54
82.50°	0.78	0.97	0.77	0.75	0.70	0.83	0.80	0.88	0.74	0.67	0.62	0.57	0.49	0.77	0.81	0.86	0.78
85.00°	0.37	0.50	0.61	0.50	0.50	0.63	0.58	0.52	0.35	0.30	0.43	0.54	0.54	0.37	0.41	0.52	0.37
87.50°	0.40	0.45	0.59	0.39	0.29	0.44	0.60	0.57	0.56	0.40	0.34	0.43	0.40	0.60	0.43	0.52	0.40
90.00°	0.40	0.46	0.40	0.43	0.33	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.53	0.42	0.40
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

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Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	650	650	650	650	635	635	635	635	606	606	606	581	581	581	557	557	557	546
	1	623	609	597	586	610	598	587	577	576	567	559	556	549	543	537	532	527	521
	2	597	574	554	538	585	564	547	532	547	533	520	531	520	509	516	507	499	497
	3	573	542	519	500	562	535	513	496	521	503	488	508	493	481	496	484	473	475
	4	550	515	489	469	541	509	485	466	497	477	461	487	470	456	477	463	451	454
RCR	5	529	490	463	443	521	485	460	441	476	454	437	467	448	434	459	443	430	435
	6	509	468	440	421	502	464	438	419	456	434	417	449	429	414	442	425	411	418
	7	490	448	420	401	484	445	419	400	438	415	398	432	412	396	426	408	394	402
	8	473	430	403	384	467	427	401	383	421	398	382	416	395	380	412	393	379	387
	9	457	413	386	368	452	411	385	368	406	383	367	402	381	365	398	378	364	373
	10	442	398	372	354	437	396	371	354	392	369	353	388	367	352	384	365	351	360

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	62.6 fc	2.3 ft
6.5 ft	44.8 fc	2.7 ft
7.5 ft	33.7 fc	3.2 ft
8.0 ft	29.6 fc	3.4 ft
10.0 ft	18.9 fc	4.2 ft
12.0 ft	13.1 fc	5.1 ft
14.0 ft	9.7 fc	5.9 ft
16.0 ft	7.4 fc	6.8 ft
20.0 ft	4.7 fc	8.4 ft
24.0 ft	3.3 fc	10.1 ft
28.0 ft	2.4 fc	11.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	648,684	648,684	648,684
45.00°	6,972	7,077	7,141
55.00°	5,836	6,238	6,603
65.00°	5,204	4,921	4,846
75.00°	4,076	3,493	3,535
85.00°	1,467	2,386	1,971

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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	10.4	11.4	10.8	11.7	12.0	10.8	11.7	11.1	12.0	12.4
	3H	11.7	12.6	12.1	12.9	13.3	11.9	12.7	12.3	13.1	13.4
	4H	12.2	13.0	12.6	13.3	13.7	12.2	13.0	12.6	13.4	13.7
	6H	12.5	13.2	12.9	13.5	13.9	12.5	13.2	12.9	13.5	13.9
	8H	12.5	13.2	12.9	13.5	14.0	12.5	13.1	12.9	13.5	13.9
	12H	12.5	13.1	12.9	13.5	13.9	12.4	13.1	12.9	13.5	13.9
4H	2H	10.7	11.5	11.1	11.8	12.2	11.2	11.9	11.6	12.3	12.7
	3H	12.2	12.9	12.7	13.3	13.7	12.4	13.0	12.8	13.5	13.9
	4H	12.8	13.4	13.2	13.8	14.2	12.8	13.4	13.3	13.8	14.3
	6H	13.1	13.6	13.6	14.1	14.5	13.2	13.7	13.6	14.1	14.6
	8H	13.2	13.6	13.7	14.1	14.6	13.2	13.6	13.7	14.1	14.6
	12H	13.2	13.6	13.7	14.0	14.5	13.2	13.6	13.7	14.1	14.5
8H	4H	12.9	13.3	13.4	13.8	14.3	12.9	13.4	13.4	13.8	14.3
	6H	13.3	13.7	13.8	14.2	14.6	13.3	13.7	13.8	14.2	14.7
	8H	13.4	13.7	13.9	14.2	14.7	13.4	13.7	13.9	14.2	14.7
	12H	13.4	13.7	13.9	14.2	14.8	13.4	13.7	13.9	14.2	14.8
12H	4H	12.8	13.2	13.3	13.7	14.2	12.9	13.3	13.4	13.8	14.2
	6H	13.3	13.6	13.8	14.1	14.6	13.3	13.6	13.8	14.1	14.6
	8H	13.4	13.7	13.9	14.2	14.7	13.4	13.7	13.9	14.1	14.7

Corrected UGR values based on total output lumens

SHR = 1.0

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