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 DLFLGC MW

Nom 3" Square Infinium recessed downlight

Test Number

SP-00762

Test Date

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

© Spectrum Lighting

Summary of Results

Power

Input Watts	15 W

Lumen Output

Output Lumens	891
Efficacy	59.39 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.66
Two luminaires, plane 90°	0.67
Four luminaires	0.71

Full Beam Angle

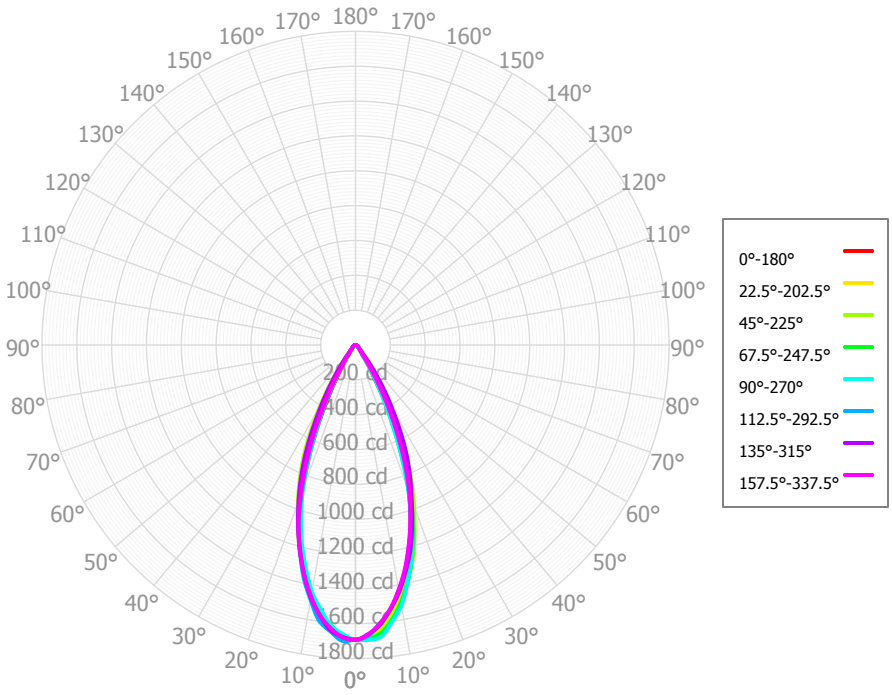
0° - 180°	41°
90° - 270°	41°

IES File Header Contents

Keyword	Value
TEST	SP-00762
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	2/28/2019
LUMCAT	IF03SMx xx 835 020 DLFLGC MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 41 degrees
OTHER	Flood 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

© Spectrum Lighting

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	152.20	17.08%	90.00° - 100.00°	0.07	0.01%
10.00° - 20.00°	333.41	37.43%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	265.13	29.76%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	82.46	9.26%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	24.77	2.78%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	14.85	1.67%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	10.70	1.20%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	5.48	0.61%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.80	0.20%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	890.79	99.99%	0.00° - 180.00°	890.87	100.00%

© Spectrum Lighting

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°	1,692.54	1,692.54	1,692.54	1,692.54	1,692.54	1,692.54	1,692.54	1,692.54	1,692.54	1,692.54	1,692.54	1,692.54	1,692.54	1,692.54	1,692.54	1,692.54	1,692.54
2.50°	1,668.13	1,678.05	1,678.23	1,689.34	1,695.37	1,700.60	1,677.78	1,680.31	1,670.73	1,670.40	1,663.30	1,667.29	1,661.72	1,671.91	1,661.73	1,665.85	1,668.13
5.00°	1,630.76	1,631.30	1,654.75	1,661.74	1,682.28	1,650.93	1,644.33	1,632.39	1,634.62	1,617.04	1,627.57	1,617.59	1,617.52	1,604.91	1,614.01	1,605.02	1,630.76
7.50°	1,546.53	1,566.98	1,580.47	1,594.52	1,603.87	1,598.04	1,565.17	1,566.98	1,555.21	1,550.89	1,543.42	1,542.69	1,530.45	1,533.13	1,530.69	1,528.89	1,546.53
10.00°	1,455.90	1,468.66	1,500.50	1,502.61	1,519.32	1,485.71	1,474.87	1,466.82	1,464.42	1,448.62	1,457.71	1,446.39	1,440.33	1,429.68	1,441.82	1,427.45	1,455.90
12.50°	1,331.24	1,357.24	1,388.92	1,385.32	1,389.60	1,371.65	1,356.12	1,356.29	1,342.35	1,337.69	1,345.23	1,331.19	1,314.49	1,320.90	1,331.33	1,313.82	1,331.24
15.00°	1,204.06	1,224.87	1,270.44	1,255.38	1,251.61	1,230.65	1,231.36	1,224.89	1,211.70	1,208.84	1,230.96	1,206.83	1,185.98	1,188.25	1,218.69	1,183.91	1,204.06
17.50°	1,050.64	1,081.00	1,125.02	1,097.74	1,072.51	1,085.31	1,094.53	1,088.94	1,062.69	1,077.02	1,098.41	1,075.71	1,038.98	1,050.74	1,081.27	1,049.05	1,050.64
20.00°	895.48	922.27	979.60	929.28	888.38	905.39	955.59	922.90	896.22	921.74	966.15	923.84	885.30	897.31	943.00	908.68	895.48
22.50°	701.41	754.33	834.18	746.84	685.94	726.65	813.27	752.20	699.04	764.11	835.65	759.60	699.97	740.98	817.69	753.24	701.41
25.00°	510.02	576.72	685.99	560.05	496.33	554.07	665.46	577.80	511.75	589.34	701.51	599.92	522.26	577.13	691.68	584.11	510.02
27.50°	351.61	415.87	531.33	410.92	341.97	391.70	510.35	403.08	338.48	413.93	552.12	442.43	370.75	424.84	553.89	429.22	351.61
30.00°	203.62	269.77	389.50	270.37	210.64	268.48	373.01	274.97	207.13	281.33	409.15	311.81	236.18	296.10	418.80	284.86	203.62
32.50°	130.01	166.79	271.39	177.42	129.48	161.69	254.90	149.41	123.95	153.00	286.88	191.53	146.60	188.49	305.97	180.35	130.01
35.00°	66.69	94.63	173.63	91.84	71.68	102.05	165.00	104.22	73.72	101.71	180.19	122.28	78.68	115.26	199.72	100.31	66.69
37.50°	52.17	59.66	106.98	64.56	55.01	57.48	99.99	61.04	55.22	54.45	112.00	67.99	56.49	65.60	128.18	62.85	52.17
40.00°	39.60	46.12	61.82	43.04	42.24	46.46	61.80	47.48	42.51	43.27	61.12	48.54	39.76	47.82	67.34	46.29	39.60
42.50°	33.85	37.15	43.28	37.21	35.02	37.82	43.40	34.99	34.34	33.07	43.93	36.69	32.21	35.97	48.43	37.55	33.85
45.00°	28.56	30.36	32.06	32.01	29.41	33.51	33.06	30.70	28.64	28.35	30.96	29.98	25.93	30.64	32.99	31.81	28.56
47.50°	24.49	26.15	28.21	26.83	25.67	29.01	27.51	26.61	24.52	23.94	24.80	24.05	21.42	25.63	27.70	26.70	24.49
50.00°	20.88	22.90	24.16	21.80	22.55	24.21	23.18	23.57	21.01	20.73	20.17	21.71	17.93	20.93	22.82	21.78	20.88
52.50°	18.25	19.01	19.93	19.11	20.03	20.12	19.42	20.57	17.81	17.91	17.53	19.67	15.61	17.46	18.90	19.51	18.25
55.00°	15.84	14.95	17.02	16.50	17.41	16.86	17.28	17.71	15.07	16.26	15.61	16.30	13.73	14.91	15.78	17.83	15.84
57.50°	13.84	13.04	15.01	14.51	14.70	15.16	15.77	15.02	12.51	14.66	14.44	12.92	12.27	13.55	14.16	16.01	13.84
60.00°	12.30	11.60	13.93	12.74	13.30	15.01	14.70	12.82	11.61	13.16	13.24	12.12	11.10	12.92	13.00	14.18	12.30
62.50°	11.42	11.03	13.36	12.18	12.75	13.92	13.75	11.11	11.23	11.74	12.04	11.32	10.14	12.09	12.51	12.80	11.42
65.00°	10.55	10.58	11.76	11.46	11.58	12.06	11.88	10.52	10.24	10.44	10.59	10.38	9.69	11.17	11.53	11.46	10.55
67.50°	9.70	9.84	9.69	10.18	10.10	9.91	9.83	9.55	9.11	9.16	8.97	9.33	9.55	9.54	9.95	10.25	9.70
70.00°	8.80	8.97	8.09	8.53	7.87	7.61	7.51	8.03	7.24	7.90	7.54	7.72	7.95	7.65	8.28	8.98	8.80
72.50°	7.85	7.17	6.57	6.26	5.49	5.98	5.54	6.58	5.63	6.36	6.22	6.51	6.01	6.49	6.54	7.34	7.85
75.00°	5.72	5.24	4.61	4.94	4.63	4.57	4.30	5.17	4.72	4.70	5.53	5.80	4.77	5.38	5.50	5.74	5.72
77.50°	3.92	3.16	3.34	4.08	3.53	3.46	3.13	3.84	4.10	3.04	4.01	4.53	4.01	4.17	4.52	4.16	3.92
80.00°	3.20	2.74	2.74	3.45	2.36	2.48	2.38	3.05	3.21	2.70	2.52	3.41	3.36	3.17	3.31	3.42	3.20
82.50°	2.73	2.05	2.26	2.44	2.21	1.90	1.91	2.50	2.21	2.06	2.23	2.66	2.21	2.32	1.96	2.48	2.73
85.00°	1.44	1.58	1.59	1.15	0.99	1.02	1.44	1.66	1.67	1.23	1.27	1.75	1.20	1.70	1.57	1.59	1.44
87.50°	1.33	1.17	1.07	1.35	0.78	1.19	1.23	1.39	1.26	1.00	1.20	0.95	1.19	1.21	0.93	1.28	1.33
90.00°	0.88	1.29	1.14	1.28	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08	1.05	1.08	0.88
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

© Spectrum Lighting

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%	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	1,061	1,061	1,061	1,061	1,036	1,036	1,036	1,036	990	990	990	948	948	948	909	909	909	891	
	1	1,014	991	970	951	992	971	953	936	936	921	907	903	891	880	872	863	855	846	
	2	969	929	895	867	950	913	883	857	885	860	839	859	838	821	834	818	804	802	
	3	926	874	833	801	909	862	824	794	839	807	782	817	791	770	798	776	758	761	
	4	886	825	780	746	871	815	774	742	796	761	733	779	749	725	763	738	716	724	
RCR	5	849	781	735	700	835	773	730	697	758	720	691	744	711	685	730	702	679	689	
	6	813	742	694	660	801	735	690	658	723	683	653	711	676	649	699	669	645	657	
	7	780	706	658	625	769	701	655	623	690	649	620	680	644	617	670	638	614	628	
	8	749	674	626	594	739	669	624	592	660	619	590	651	614	588	643	610	585	600	
	9	720	644	597	565	711	640	595	564	632	591	563	624	587	561	617	584	559	575	
	10	693	616	570	540	685	613	569	539	606	565	538	599	562	536	593	559	535	551	

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	56.0 fc	4.1 ft
6.5 ft	40.1 fc	4.9 ft
7.5 ft	30.1 fc	5.6 ft
8.0 ft	26.4 fc	6.0 ft
10.0 ft	16.9 fc	7.5 ft
12.0 ft	11.8 fc	9.0 ft
14.0 ft	8.6 fc	10.5 ft
16.0 ft	6.6 fc	12.0 ft
20.0 ft	4.2 fc	15.0 ft
24.0 ft	2.9 fc	18.0 ft
28.0 ft	2.2 fc	21.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	711,652	711,652	711,652
45.00°	16,982	19,063	17,486
55.00°	11,614	12,477	12,761
65.00°	10,499	11,699	11,526
75.00°	9,296	7,495	7,519
85.00°	6,954	7,660	4,758

© Spectrum Lighting

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	13.4	14.3	13.7	14.6	15.0	13.2	14.1	13.5	14.5	14.8
	3H	15.3	16.1	15.6	16.5	16.8	15.0	15.8	15.4	16.2	16.5
	4H	15.9	16.7	16.3	17.0	17.4	15.4	16.2	15.8	16.6	17.0
	6H	16.2	16.9	16.6	17.3	17.7	15.8	16.5	16.2	16.9	17.3
	8H	16.3	17.0	16.8	17.4	17.8	15.9	16.5	16.3	16.9	17.4
	12H	16.4	17.1	16.9	17.5	17.9	15.9	16.6	16.3	16.9	17.4
4H	2H	14.0	14.8	14.4	15.2	15.5	13.8	14.6	14.2	15.0	15.4
	3H	16.0	16.7	16.5	17.1	17.5	15.7	16.3	16.1	16.7	17.1
	4H	16.7	17.3	17.2	17.7	18.2	16.2	16.8	16.7	17.3	17.7
	6H	17.1	17.6	17.6	18.0	18.5	16.7	17.2	17.2	17.6	18.1
	8H	17.3	17.7	17.8	18.2	18.7	16.8	17.3	17.3	17.7	18.2
	12H	17.4	17.8	17.9	18.3	18.8	16.9	17.3	17.4	17.8	18.3
8H	4H	16.8	17.3	17.3	17.8	18.2	16.4	16.8	16.9	17.3	17.8
	6H	17.3	17.7	17.9	18.2	18.7	16.9	17.3	17.4	17.8	18.3
	8H	17.6	17.9	18.1	18.4	18.9	17.2	17.5	17.7	18.0	18.5
	12H	17.8	18.1	18.3	18.6	19.2	17.3	17.6	17.9	18.1	18.7
12H	4H	16.8	17.2	17.3	17.7	18.2	16.4	16.8	16.9	17.2	17.7
	6H	17.4	17.7	17.9	18.2	18.7	16.9	17.3	17.5	17.7	18.3
	8H	17.7	17.9	18.2	18.4	19.0	17.2	17.5	17.7	18.0	18.6

Corrected UGR values based on total output lumens

SHR = 1.0

© Spectrum Lighting