

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 PC 835 030 DLFLGC MW
Nom 3" Square Infinium recessed downlight

Test Number

SP-00762_M-30L

Test Date

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

Summary of Results

Power

Input Watts	20.4 W
-------------	--------

Lumen Output

Output Lumens	1336
Efficacy	65.5 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

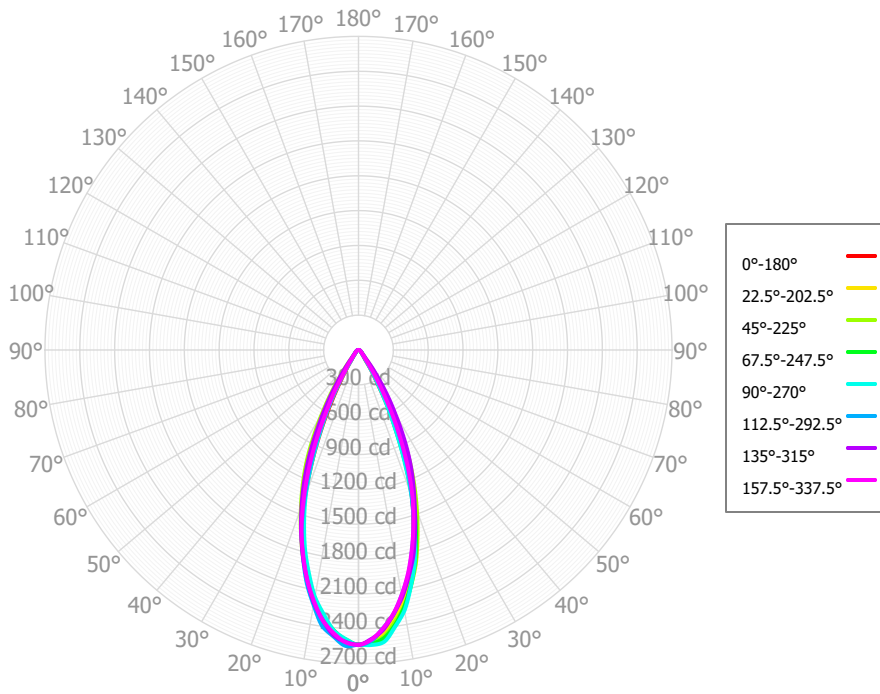
Full Beam Angle

0° - 180°	41°
90° - 270°	41°

IES File Header Contents

Keyword	Value
TEST	SP-00762_M-30L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	2/17/2021
LUMCAT	IF03SMx xx PC 835 030 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: 27K x 0.96, 30K x 0.98, 40K x 1.04
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting, scaled from 20L
_CRI	80
_LAMPMULT	N/A, 30L only
_CCTMULT	27K x 0.96, 30K x 0.98, 40K x 1.04
_CCTMULTA	27HK x 0.87, 30HK x 0.81

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	228.30	17.08%	90.00° - 100.00°	0.11	0.01%
10.00° - 20.00°	500.12	37.43%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	397.69	29.76%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	123.68	9.26%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	37.15	2.78%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	22.28	1.67%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	16.04	1.20%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	8.22	0.61%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.69	0.20%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1336.19	99.99%	0.00° - 180.00°	1336.30	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°	2538.80	2538.80	2538.80	2538.80	2538.80	2538.80	2538.80	2538.80	2538.80	2538.80	2538.80	2538.80	2538.80	2538.80	2538.80	2538.80	2538.80
2.50°	2502.19	2517.08	2517.34	2534.01	2543.06	2550.90	2516.66	2520.47	2506.09	2505.61	2494.95	2500.93	2492.58	2507.86	2492.59	2498.77	2502.19
5.00°	2446.14	2446.95	2482.12	2492.61	2523.42	2476.40	2466.49	2448.59	2451.92	2425.56	2441.36	2426.38	2426.28	2407.36	2421.02	2407.53	2446.14
7.50°	2319.79	2350.48	2370.71	2391.77	2405.81	2397.06	2347.76	2350.46	2332.82	2326.33	2315.13	2314.03	2295.67	2299.70	2296.03	2293.34	2319.79
10.00°	2183.86	2203.00	2250.75	2253.92	2278.98	2228.56	2212.30	2200.23	2196.63	2172.93	2186.56	2169.59	2160.49	2144.52	2162.74	2141.18	2183.86
12.50°	1996.85	2035.86	2083.38	2077.98	2084.39	2057.48	2034.18	2034.44	2013.52	2006.53	2017.85	1996.78	1971.74	1981.35	1997.00	1970.73	1996.85
15.00°	1806.09	1837.30	1905.65	1883.06	1877.41	1845.98	1847.03	1837.33	1817.55	1813.26	1846.44	1810.25	1778.97	1782.37	1828.04	1775.86	1806.09
17.50°	1575.96	1621.50	1687.53	1646.62	1608.76	1627.97	1641.80	1633.41	1594.04	1615.53	1647.61	1613.57	1558.47	1576.11	1621.90	1573.58	1575.96
20.00°	1343.22	1383.40	1469.40	1393.93	1332.57	1358.08	1433.39	1384.35	1344.33	1382.60	1449.22	1385.76	1327.95	1345.96	1414.50	1363.01	1343.22
22.50°	1052.12	1131.50	1251.27	1120.26	1028.91	1089.98	1219.90	1128.29	1048.55	1146.16	1253.47	1139.39	1049.95	1111.47	1226.54	1129.85	1052.12
25.00°	765.03	865.09	1028.98	840.08	744.49	831.10	998.19	866.71	767.63	884.00	1052.27	899.89	783.39	865.70	1037.52	876.16	765.03
27.50°	527.42	623.80	796.99	616.39	512.96	587.56	765.53	604.62	507.72	620.90	828.18	663.64	556.13	637.27	830.84	643.84	527.42
30.00°	305.42	404.65	584.25	405.56	315.95	402.72	559.51	412.45	310.69	422.00	613.72	467.71	354.26	444.14	628.20	427.30	305.42
32.50°	195.02	250.18	407.09	266.13	194.22	242.54	382.35	224.12	185.93	229.51	430.31	287.29	219.90	282.73	458.96	270.52	195.02
35.00°	100.04	141.94	260.44	137.76	107.52	153.08	247.50	156.32	110.58	152.57	270.28	183.43	118.01	172.89	299.59	150.47	100.04
37.50°	78.26	89.49	160.47	96.84	82.51	86.22	149.98	91.57	82.83	81.67	168.00	101.98	84.73	98.40	192.26	94.28	78.26
40.00°	59.40	69.17	92.73	64.55	63.36	69.69	92.70	71.22	63.76	64.90	91.68	72.82	59.64	71.73	101.01	69.44	59.40
42.50°	50.78	55.73	64.92	55.81	52.53	56.73	65.11	52.48	51.50	49.60	65.89	55.03	48.32	53.96	72.65	56.32	50.78
45.00°	42.84	45.54	48.09	48.01	44.11	50.27	49.59	46.05	42.97	42.53	46.44	44.97	38.90	45.95	49.49	47.72	42.84
47.50°	36.73	39.23	42.32	40.25	38.50	43.52	41.26	39.91	36.78	35.90	37.19	36.07	32.13	38.45	41.55	40.05	36.73
50.00°	31.32	34.35	36.24	32.70	33.83	36.32	34.76	35.36	31.51	31.10	30.25	32.56	26.89	31.40	34.23	32.67	31.32
52.50°	27.37	28.52	29.90	28.67	30.05	30.17	29.13	30.86	26.72	26.86	26.30	29.51	23.41	26.19	28.34	29.27	27.37
55.00°	23.77	22.42	25.53	24.75	26.11	25.29	25.92	26.57	22.61	24.39	23.41	24.45	20.60	22.37	23.67	26.75	23.77
57.50°	20.76	19.57	22.52	21.76	22.05	22.74	23.65	22.53	18.77	21.99	21.65	19.39	18.41	20.33	21.24	24.02	20.76
60.00°	18.46	17.39	20.90	19.11	19.95	22.51	22.04	19.22	17.42	19.74	19.87	18.19	16.64	19.38	19.50	21.26	18.46
62.50°	17.13	16.54	20.05	18.27	19.12	20.88	20.63	16.66	16.85	17.61	18.05	16.97	15.21	18.14	18.77	19.19	17.13
65.00°	15.83	15.87	17.64	17.19	17.38	18.09	17.82	15.78	15.36	15.66	15.88	15.57	14.54	16.75	17.30	17.19	15.83
67.50°	14.56	14.76	14.53	15.27	15.15	14.87	14.74	14.32	13.66	13.74	13.46	13.99	14.33	14.31	14.92	15.37	14.56
70.00°	13.20	13.46	12.13	12.80	11.81	11.41	11.26	12.05	10.86	11.86	11.31	11.58	11.93	11.47	12.42	13.47	13.20
72.50°	11.78	10.76	9.86	9.39	8.24	8.97	8.31	9.87	8.44	9.54	9.32	9.77	9.01	9.74	9.81	11.01	11.78
75.00°	8.58	7.87	6.92	7.41	6.94	6.86	6.44	7.76	7.08	7.05	8.29	8.69	7.16	8.07	8.25	8.60	8.58
77.50°	5.88	4.75	5.01	6.12	5.29	5.18	4.70	5.76	6.16	4.56	6.02	6.80	6.01	6.25	6.78	6.24	5.88
80.00°	4.81	4.10	4.11	5.18	3.54	3.71	3.57	4.57	4.81	4.05	3.77	5.11	5.03	4.76	4.97	5.13	4.81
82.50°	4.10	3.08	3.39	3.65	3.32	2.85	2.87	3.75	3.32	3.09	3.34	4.00	3.32	3.48	2.94	3.71	4.10
85.00°	2.16	2.37	2.38	1.73	1.48	1.53	2.16	2.49	2.51	1.84	1.90	2.62	1.80	2.55	2.35	2.39	2.16
87.50°	2.00	1.76	1.60	2.03	1.16	1.78	1.84	2.08	1.89	1.50	1.80	1.42	1.79	1.81	1.39	1.93	2.00
90.00°	1.33	1.93	1.70	1.92	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.62	1.57	1.61	1.33
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%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	1591	1591	1591	1591	1554	1554	1554	1554	1485	1485	1485	1422	1422	1422	1363	1363	1336
	1	1521	1486	1455	1426	1488	1457	1429	1403	1403	1381	1360	1354	1336	1320	1308	1295	1269
	2	1453	1393	1343	1301	1424	1370	1325	1286	1327	1290	1258	1288	1258	1231	1251	1227	1203
	3	1389	1311	1250	1201	1364	1292	1236	1191	1258	1211	1172	1226	1187	1154	1196	1164	1142
	4	1329	1238	1170	1119	1306	1223	1161	1113	1195	1142	1100	1169	1124	1087	1144	1106	1086
	5	1273	1172	1102	1050	1252	1160	1094	1045	1137	1080	1036	1115	1066	1027	1095	1053	1034
	6	1220	1113	1041	990	1201	1103	1036	987	1084	1024	980	1066	1014	974	1049	1003	986
	7	1170	1060	988	937	1154	1051	983	935	1035	974	930	1020	966	925	1005	957	942
	8	1124	1011	939	890	1109	1003	936	888	990	928	885	977	922	881	964	915	901
	9	1080	966	895	848	1067	959	892	847	948	887	844	936	881	841	926	876	862
	10	1039	924	855	810	1027	919	853	808	909	848	806	899	844	804	890	839	827

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	83.9 fc	4.1 ft
6.5 ft	60.1 fc	4.9 ft
7.5 ft	45.1 fc	5.6 ft
8.0 ft	39.7 fc	6.0 ft
10.0 ft	25.4 fc	7.5 ft
12.0 ft	17.6 fc	9.0 ft
14.0 ft	13.0 fc	10.5 ft
16.0 ft	9.9 fc	12.0 ft
20.0 ft	6.3 fc	15.0 ft
24.0 ft	4.4 fc	18.0 ft
28.0 ft	3.2 fc	21.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1067478	1067478	1067478
45.00°	25472	28595	26230
55.00°	17421	18715	19141
65.00°	15749	17549	17289
75.00°	13944	11243	11278
85.00°	10431	11489	7137

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	14.8	15.7	15.1	16.1	16.4	14.6	15.6	14.9	15.9	16.2
	3H	16.7	17.5	17.1	17.9	18.2	16.4	17.2	16.8	17.6	17.9
	4H	17.3	18.1	17.7	18.4	18.8	16.8	17.6	17.2	18.0	18.4
	6H	17.6	18.3	18.0	18.7	19.1	17.2	17.9	17.6	18.3	18.7
	8H	17.7	18.4	18.2	18.8	19.2	17.3	18.0	17.7	18.3	18.8
	12H	17.8	18.5	18.3	18.9	19.3	17.3	18.0	17.8	18.4	18.8
4H	2H	15.4	16.2	15.8	16.6	17.0	15.2	16.0	15.6	16.4	16.8
	3H	17.4	18.1	17.9	18.5	18.9	17.1	17.7	17.5	18.1	18.5
	4H	18.1	18.7	18.6	19.1	19.6	17.7	18.2	18.1	18.7	19.1
	6H	18.5	19.0	19.0	19.5	19.9	18.1	18.6	18.6	19.0	19.5
	8H	18.7	19.1	19.2	19.6	20.1	18.2	18.7	18.7	19.2	19.6
	12H	18.8	19.2	19.3	19.7	20.2	18.3	18.7	18.8	19.2	19.7
8H	4H	18.3	18.7	18.7	19.2	19.6	17.8	18.3	18.3	18.7	19.2
	6H	18.8	19.1	19.3	19.6	20.1	18.3	18.7	18.8	19.2	19.7
	8H	19.0	19.3	19.5	19.8	20.3	18.6	18.9	19.1	19.4	19.9
	12H	19.2	19.5	19.7	20.0	20.6	18.7	19.0	19.3	19.5	20.1
12H	4H	18.2	18.6	18.7	19.1	19.6	17.8	18.2	18.3	18.7	19.1
	6H	18.8	19.1	19.3	19.6	20.1	18.3	18.7	18.9	19.1	19.7
	8H	19.1	19.3	19.6	19.8	20.4	18.6	18.9	19.2	19.4	20.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0