

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 DLWFGC MW
Nom 3" Square Infinium recessed downlight

Test Number

SP-00765_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	1393
Efficacy	68.28 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.9
Two luminaires, plane 90°	0.9
Four luminaires	0.91

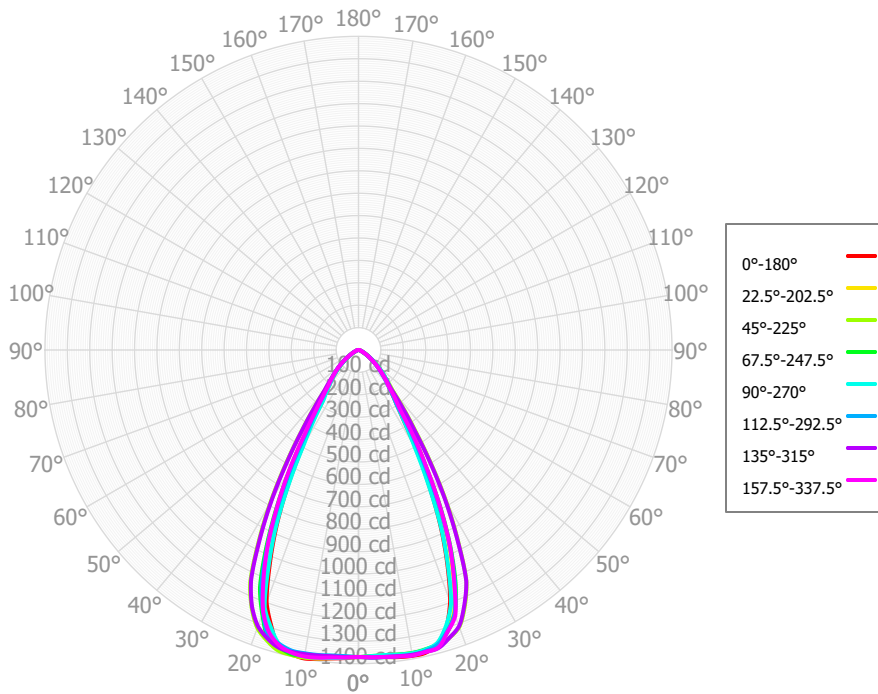
Full Beam Angle

0° - 180°	55°
90° - 270°	54°

IES File Header Contents

Keyword	Value
TEST	SP-00765_M-30L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	2/28/2019
LUMCAT	IF03SMx xx PC 835 030 DLWFGC MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 54 degrees
OTHER	Wide 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
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

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	133.67	9.60%	90.00° - 100.00°	0.12	0.01%
10.00° - 20.00°	380.30	27.30%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	435.69	31.28%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	229.34	16.47%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	119.85	8.60%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	61.01	4.38%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	22.71	1.63%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	7.85	0.56%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.29	0.16%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1392.72	99.99%	0.00° - 180.00°	1392.83	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°	1371.16	1371.16	1371.16	1371.16	1371.16	1371.16	1371.16	1371.16	1371.16	1371.16	1371.16	1371.16	1371.16	1371.16	1371.16	1371.16	1371.16
2.50°	1373.91	1373.45	1367.83	1369.48	1367.88	1368.61	1372.46	1374.52	1377.05	1373.06	1374.47	1371.43	1374.59	1374.85	1374.02	1373.36	1373.91
5.00°	1376.50	1375.87	1368.19	1370.23	1367.09	1369.57	1372.93	1378.38	1382.51	1378.29	1381.22	1376.05	1380.01	1376.60	1375.78	1375.80	1376.50
7.50°	1383.16	1379.18	1371.40	1371.69	1371.89	1373.79	1376.15	1385.97	1390.22	1388.70	1388.24	1382.35	1385.00	1379.53	1378.89	1380.45	1383.16
10.00°	1386.67	1383.01	1374.34	1374.05	1375.23	1375.37	1379.06	1389.58	1398.56	1393.48	1394.37	1386.83	1389.48	1383.55	1381.99	1385.52	1386.67
12.50°	1384.82	1377.94	1373.93	1370.00	1371.38	1375.37	1380.67	1384.21	1390.12	1392.97	1394.21	1390.56	1377.64	1377.01	1381.00	1381.08	1384.82
15.00°	1359.42	1368.81	1370.75	1359.43	1355.25	1360.25	1376.09	1365.94	1378.27	1373.44	1388.97	1372.02	1361.72	1362.53	1378.09	1375.50	1359.42
17.50°	1301.75	1315.90	1348.23	1319.95	1295.65	1337.95	1350.98	1324.33	1294.06	1339.30	1360.06	1346.49	1299.98	1317.85	1348.22	1320.86	1301.75
20.00°	1196.36	1247.30	1316.09	1255.96	1207.78	1247.55	1312.88	1244.40	1199.99	1245.52	1320.88	1255.85	1223.78	1254.95	1312.74	1263.41	1196.36
22.50°	1037.39	1109.40	1239.61	1133.79	1044.56	1132.11	1242.14	1109.00	1035.23	1114.37	1246.40	1149.59	1051.63	1125.12	1234.40	1116.46	1037.39
25.00°	866.36	952.55	1140.55	971.84	870.46	959.39	1135.05	956.49	865.39	953.70	1143.48	974.89	874.19	962.73	1138.81	967.33	866.36
27.50°	684.21	779.80	963.26	791.40	673.08	770.21	956.61	783.70	684.28	778.32	965.45	788.98	672.62	776.37	957.91	787.46	684.21
30.00°	524.63	603.98	785.21	600.70	503.93	592.00	776.97	614.98	505.03	607.76	786.15	603.11	490.04	580.77	776.90	610.32	524.63
32.50°	381.87	459.89	605.22	454.64	382.60	416.04	595.41	450.21	391.30	439.10	604.24	417.26	370.04	434.99	595.49	458.59	381.87
35.00°	296.77	319.84	446.03	328.42	294.97	330.57	440.55	335.67	283.63	334.50	445.19	324.33	272.81	303.72	431.74	319.93	296.77
37.50°	246.72	263.71	329.22	262.87	253.16	257.18	320.28	260.67	242.36	249.47	324.01	236.12	233.61	246.20	316.59	259.92	246.72
40.00°	210.67	213.28	239.69	218.10	218.24	218.54	237.03	212.21	203.06	208.29	234.34	205.21	198.48	204.46	225.08	206.12	210.67
42.50°	181.48	182.48	195.62	186.99	191.09	182.61	192.57	180.81	176.98	176.82	187.19	174.65	171.61	173.31	184.01	177.93	181.48
45.00°	155.62	152.25	159.68	159.42	164.20	158.44	158.55	155.35	151.30	151.81	151.15	149.24	146.09	143.71	148.97	150.51	155.62
47.50°	131.04	131.24	134.60	134.39	137.53	134.50	133.63	132.98	127.47	127.79	127.23	124.09	122.75	121.47	124.28	125.42	131.04
50.00°	106.65	110.16	111.29	109.82	113.10	110.80	111.10	110.07	104.30	104.74	104.53	101.08	100.58	99.82	101.81	101.81	106.65
52.50°	82.32	88.27	89.88	88.11	90.34	87.52	90.25	86.92	83.32	81.78	82.91	79.29	79.95	82.01	82.45	81.74	82.32
55.00°	65.35	67.43	70.78	66.72	70.69	69.29	71.40	68.83	64.15	65.56	65.47	63.88	62.10	64.39	65.61	63.87	65.35
57.50°	49.97	53.01	53.75	52.13	52.95	52.03	53.67	52.32	49.59	49.65	51.10	49.25	47.22	50.56	51.62	50.13	49.97
60.00°	38.43	39.53	40.07	37.94	39.55	41.22	41.48	40.17	37.06	39.01	39.22	37.52	35.81	37.22	39.71	37.81	38.43
62.50°	27.43	30.16	28.82	29.56	28.25	30.86	31.83	29.04	28.57	28.61	28.80	27.09	27.41	29.67	29.73	27.60	27.43
65.00°	21.06	21.91	21.24	21.49	20.82	22.52	23.73	23.08	21.33	21.51	21.70	20.38	21.62	22.38	21.90	20.06	21.06
67.50°	15.14	17.03	15.79	17.81	14.84	15.53	16.17	17.94	15.99	15.21	16.12	14.79	17.62	16.70	15.68	15.75	15.14
70.00°	12.31	12.64	12.28	13.87	11.03	11.71	12.25	13.50	12.30	12.51	13.07	11.16	13.85	11.85	11.21	11.89	12.31
72.50°	9.64	8.98	9.46	8.97	7.84	8.83	8.98	9.65	9.91	10.29	10.54	9.35	10.20	9.14	7.53	8.34	9.64
75.00°	7.43	6.77	7.77	6.06	6.47	6.64	6.53	7.41	7.27	8.68	7.92	8.48	6.97	7.29	7.01	6.71	7.43
77.50°	5.37	5.20	5.70	4.71	5.25	4.63	5.19	5.51	5.46	6.08	6.14	4.88	4.49	5.97	5.69	5.10	5.37
80.00°	3.79	3.93	3.50	3.25	4.00	3.71	3.85	3.75	4.67	3.97	4.58	3.08	3.04	4.13	3.27	3.38	3.79
82.50°	2.92	3.15	2.90	2.22	1.85	2.82	2.40	2.33	3.15	2.64	2.77	2.53	2.52	3.44	2.70	3.03	2.92
85.00°	1.50	1.72	1.33	1.57	1.34	1.92	2.27	2.12	1.38	1.95	2.11	1.90	1.37	2.19	2.60	1.40	1.50
87.50°	1.72	1.46	1.17	1.29	1.46	1.63	1.74	2.12	1.85	1.74	1.60	1.87	1.55	1.30	1.89	1.64	1.72
90.00°	1.24	2.00	1.25	1.59	2.26	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	1.87	1.72	1.47	1.24
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	1658	1658	1658	1658	1620	1620	1620	1620	1548	1548	1548	1482	1482	1482	1421	1421	1393
	1	1574	1533	1496	1462	1540	1503	1469	1439	1446	1419	1395	1394	1373	1353	1346	1329	1303
	2	1489	1417	1356	1306	1458	1392	1338	1291	1347	1302	1263	1305	1268	1235	1266	1236	1211
	3	1408	1313	1239	1180	1380	1293	1225	1170	1256	1198	1151	1222	1173	1133	1190	1150	1127
	4	1332	1220	1138	1076	1306	1204	1128	1069	1173	1108	1056	1145	1089	1044	1119	1071	1050
	5	1261	1138	1051	988	1237	1124	1044	983	1099	1028	974	1075	1014	966	1053	1000	981
	6	1195	1064	976	913	1173	1052	970	910	1031	958	903	1011	946	897	992	935	919
	7	1133	997	909	848	1114	988	905	845	970	895	841	953	886	836	937	877	862
	8	1076	938	851	791	1059	930	847	789	914	839	786	900	832	782	886	825	811
	9	1024	884	798	740	1008	877	795	739	864	789	736	851	783	734	839	777	765
	10	975	835	751	696	961	829	749	694	818	744	692	807	738	690	796	734	723

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	45.3 fc	5.7 ft
6.5 ft	32.5 fc	6.7 ft
7.5 ft	24.4 fc	7.7 ft
8.0 ft	21.4 fc	8.2 ft
10.0 ft	13.7 fc	10.3 ft
12.0 ft	9.5 fc	12.4 ft
14.0 ft	7.0 fc	14.4 ft
16.0 ft	5.4 fc	16.5 ft
20.0 ft	3.4 fc	20.6 ft
24.0 ft	2.4 fc	24.7 ft
28.0 ft	1.7 fc	28.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	576526	576526	576526
45.00°	92539	94949	97636
55.00°	47905	51887	51823
65.00°	20951	21135	20710
75.00°	12075	12621	10508
85.00°	7237	6404	6476

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

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0