

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03SMx xx PC 835 030 DLWFGP MW
Nom 3" Square Infinium recessed downlight

Test Number

SP-00765_2_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
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Lumen Output

Output Lumens	1357
Efficacy	66.52 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.84
Two luminaires, plane 90°	0.84
Four luminaires	0.86

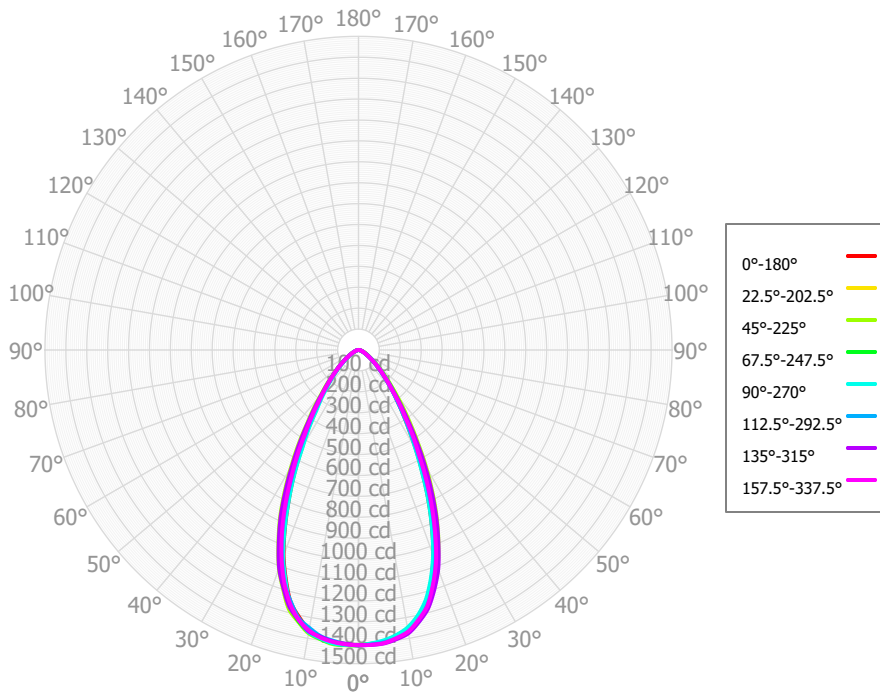
Full Beam Angle

0° - 180°	53°
90° - 270°	53°

IES File Header Contents

Keyword	Value
TEST	SP-00765_2_M-30L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	2/15/2021
LUMCAT	IF03SMx xx PC 835 030 DLWFGP MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 54 degrees
OTHER	Wide Flood optic, Solite Lens
OTHER	Aluminum bezel contains lens
LAMPCAT	N/A
LAMP	N/A, CRI: 80, Philips emitter
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°	134.60	9.92%	90.00° - 100.00°	0.13	0.01%
10.00° - 20.00°	347.94	25.64%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	377.29	27.80%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	247.81	18.26%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	135.49	9.98%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	67.07	4.94%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	30.89	2.28%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	12.99	0.96%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.90	0.21%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1356.98	99.99%	0.00° - 180.00°	1357.10	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°	1412.44	1412.44	1412.44	1412.44	1412.44	1412.44	1412.44	1412.44	1412.44	1412.44	1412.44	1412.44	1412.44	1412.44	1412.44	1412.44	1412.44
2.50°	1408.28	1409.02	1408.85	1406.93	1405.21	1408.32	1406.98	1409.73	1408.31	1411.55	1413.88	1412.85	1412.46	1411.12	1411.84	1411.98	1408.28
5.00°	1401.53	1401.01	1401.17	1399.38	1394.37	1396.34	1400.27	1401.80	1405.45	1404.12	1412.51	1408.77	1409.09	1403.60	1408.97	1407.20	1401.53
7.50°	1385.63	1383.06	1385.65	1378.56	1376.53	1381.73	1384.20	1388.30	1386.30	1391.75	1395.58	1394.11	1391.89	1391.39	1395.15	1390.55	1385.63
10.00°	1358.20	1356.13	1362.51	1354.63	1349.10	1350.68	1367.38	1362.35	1361.09	1363.47	1375.88	1370.08	1371.16	1369.03	1376.03	1368.20	1358.20
12.50°	1314.55	1310.56	1321.25	1308.34	1303.70	1316.23	1321.77	1322.32	1310.33	1325.44	1331.51	1327.49	1318.34	1331.63	1333.15	1323.40	1314.55
15.00°	1248.62	1251.25	1268.53	1258.44	1240.54	1248.81	1273.96	1259.71	1252.37	1260.57	1284.27	1268.82	1259.58	1268.27	1282.29	1269.85	1248.62
17.50°	1157.17	1166.70	1194.19	1171.38	1150.20	1176.86	1193.85	1176.27	1155.00	1182.10	1199.53	1184.16	1159.51	1186.17	1204.08	1181.89	1157.17
20.00°	1047.39	1067.09	1106.75	1080.56	1043.81	1068.93	1110.11	1074.48	1049.20	1076.35	1112.53	1084.22	1054.57	1077.18	1115.19	1083.67	1047.39
22.50°	919.99	950.54	999.13	957.88	917.47	957.99	996.30	958.87	920.72	959.71	1000.66	963.96	921.51	957.30	998.39	960.80	919.99
25.00°	792.14	825.64	885.23	833.70	788.88	826.71	880.24	834.67	788.97	832.54	888.18	839.13	786.70	824.71	878.36	832.56	792.14
27.50°	663.93	702.41	763.34	709.24	657.92	695.27	752.22	705.06	665.76	702.15	764.27	709.36	659.30	695.38	751.72	705.11	663.93
30.00°	551.22	579.82	644.95	586.11	545.14	579.37	627.69	588.10	543.24	587.77	641.51	590.01	533.33	569.15	628.81	577.78	551.22
32.50°	448.37	480.86	530.19	486.91	447.80	465.87	516.42	477.52	451.39	477.17	530.77	480.02	439.87	462.20	512.20	478.17	448.37
35.00°	369.76	388.92	433.14	391.05	369.76	385.30	413.20	390.57	361.17	394.03	424.80	391.03	349.53	370.66	409.77	381.13	369.76
37.50°	303.94	321.29	351.25	325.30	305.05	308.28	333.85	313.19	303.60	315.38	348.44	317.60	292.23	301.18	326.78	314.48	303.94
40.00°	251.51	259.19	284.75	262.72	253.20	257.62	264.28	258.34	247.22	262.14	276.86	259.14	237.33	246.04	259.11	249.13	251.51
42.50°	204.68	214.20	229.12	217.91	208.75	209.51	217.20	210.65	206.58	211.41	226.71	209.66	197.94	201.18	208.56	208.44	204.68
45.00°	168.92	171.88	185.76	175.97	171.78	173.87	175.78	174.09	167.26	175.21	180.68	171.30	160.41	161.70	167.92	168.46	168.92
47.50°	136.72	143.43	149.39	145.63	138.25	140.49	144.71	140.13	138.24	139.76	148.20	138.47	131.09	132.62	136.58	139.76	136.72
50.00°	112.64	116.25	120.76	117.42	112.60	115.49	116.98	115.20	110.54	114.02	118.44	113.61	103.88	107.98	110.24	111.87	112.64
52.50°	90.59	94.31	95.71	95.78	89.77	91.97	94.31	91.79	89.55	88.77	95.54	91.87	83.66	88.26	87.71	90.47	90.59
55.00°	74.28	72.70	77.67	76.40	72.14	72.61	74.98	74.72	70.24	72.59	75.08	73.87	65.92	70.17	69.98	70.37	74.28
57.50°	58.97	60.60	62.22	62.41	55.99	56.19	59.76	58.33	57.08	56.99	59.62	56.98	54.59	56.46	55.22	57.38	58.97
60.00°	48.67	48.75	50.41	50.18	45.20	46.20	47.14	47.52	45.06	46.82	46.56	45.39	44.09	43.83	45.22	45.42	48.67
62.50°	38.91	40.81	39.63	41.31	35.52	36.90	37.12	37.00	36.28	37.05	37.41	35.01	35.26	36.79	37.67	37.49	38.91
65.00°	32.58	33.23	33.53	32.59	29.10	28.86	28.89	30.43	28.15	29.55	30.12	29.69	28.13	30.77	30.02	30.45	32.58
67.50°	26.48	28.36	28.40	24.09	23.12	22.21	22.08	24.02	21.38	23.06	25.15	25.14	23.62	24.76	22.34	25.86	26.48
70.00°	20.94	23.60	22.15	19.24	17.29	17.15	17.45	18.83	16.77	19.51	20.22	19.42	19.78	18.93	19.41	21.28	20.94
72.50°	16.01	19.11	16.55	17.51	12.29	13.78	13.77	14.60	14.34	15.94	15.31	14.55	16.45	15.50	17.40	16.71	16.01
75.00°	12.52	14.90	13.92	13.86	10.15	10.98	11.73	11.86	11.14	12.35	12.36	11.94	10.56	12.11	13.86	12.78	12.52
77.50°	9.02	10.71	10.84	10.11	7.67	7.85	8.18	8.35	7.70	8.59	9.28	9.04	6.32	8.80	10.08	9.25	9.02
80.00°	6.20	5.68	7.56	6.77	5.07	5.01	4.41	6.25	4.30	5.53	6.12	5.96	4.45	5.33	6.24	6.26	6.20
82.50°	4.51	3.62	4.57	2.95	2.71	2.78	3.01	4.88	2.89	3.26	4.00	3.20	3.05	3.08	3.26	4.19	4.51
85.00°	2.12	2.08	2.71	2.01	1.45	1.75	1.91	2.18	2.36	2.22	2.21	2.04	2.10	2.28	1.22	2.09	2.12
87.50°	1.80	1.95	1.90	2.43	1.76	1.51	1.30	1.58	1.99	2.02	1.62	1.83	1.69	1.88	2.00	1.83	1.80
90.00°	1.95	1.96	2.03	2.29	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.84	1.72	1.50	1.95
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	1616	1616	1616	1616	1578	1578	1578	1578	1508	1508	1508	1444	1444	1444	1385	1385	1357
	1	1530	1488	1451	1417	1496	1459	1425	1395	1403	1376	1351	1353	1331	1311	1306	1289	1273
	2	1444	1370	1310	1258	1413	1347	1291	1244	1302	1256	1216	1261	1223	1190	1223	1192	1165
	3	1362	1265	1191	1131	1334	1246	1177	1122	1210	1151	1104	1176	1127	1086	1145	1104	1069
	4	1285	1173	1090	1027	1260	1157	1080	1021	1127	1061	1008	1099	1042	996	1073	1024	984
	5	1214	1090	1004	940	1191	1077	996	936	1052	981	927	1029	967	918	1007	953	910
	6	1149	1017	929	866	1128	1006	923	863	985	912	857	965	900	851	947	890	845
	7	1088	952	864	802	1069	943	859	800	925	850	796	908	841	791	892	832	787
	8	1032	894	807	747	1015	886	803	745	870	795	742	856	788	739	842	781	735
	9	981	841	756	698	965	835	753	697	821	747	694	809	741	692	797	735	689
	10	934	794	711	655	920	788	708	654	777	703	652	766	698	650	756	693	648

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	46.7 fc	5.5 ft
6.5 ft	33.4 fc	6.5 ft
7.5 ft	25.1 fc	7.5 ft
8.0 ft	22.1 fc	8.0 ft
10.0 ft	14.1 fc	10.0 ft
12.0 ft	9.8 fc	12.0 ft
14.0 ft	7.2 fc	14.0 ft
16.0 ft	5.5 fc	16.0 ft
20.0 ft	3.5 fc	20.0 ft
24.0 ft	2.5 fc	24.1 ft
28.0 ft	1.8 fc	28.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	593883	593883	593883
45.00°	100442	110456	102147
55.00°	54448	56940	52884
65.00°	32417	33358	28950
75.00°	20336	22621	16484
85.00°	10246	13065	6977

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	21.4	22.6	21.8	22.9	23.2	21.1	22.2	21.5	22.6	22.9
	3H	22.3	23.3	22.7	23.6	24.0	21.8	22.8	22.2	23.1	23.5
	4H	22.5	23.4	22.9	23.8	24.2	22.0	22.9	22.4	23.3	23.6
	6H	22.6	23.5	23.0	23.8	24.2	22.0	22.9	22.4	23.3	23.6
	8H	22.6	23.4	23.1	23.8	24.2	22.0	22.8	22.4	23.2	23.6
	12H	22.6	23.4	23.0	23.8	24.2	22.0	22.8	22.4	23.1	23.6
4H	2H	21.6	22.6	22.0	22.9	23.3	21.3	22.2	21.7	22.6	23.0
	3H	22.7	23.4	23.1	23.8	24.2	22.1	22.9	22.5	23.3	23.7
	4H	23.0	23.7	23.4	24.1	24.6	22.4	23.1	22.8	23.5	23.9
	6H	23.2	23.8	23.6	24.2	24.7	22.5	23.1	23.0	23.5	24.0
	8H	23.2	23.7	23.7	24.2	24.7	22.5	23.0	23.0	23.5	24.0
	12H	23.2	23.7	23.7	24.2	24.6	22.5	23.0	23.0	23.4	23.9
8H	4H	23.1	23.6	23.5	24.1	24.5	22.4	23.0	22.9	23.4	23.9
	6H	23.3	23.7	23.8	24.2	24.7	22.6	23.0	23.1	23.5	24.0
	8H	23.3	23.7	23.9	24.2	24.7	22.6	23.0	23.1	23.5	24.0
	12H	23.4	23.7	23.9	24.2	24.8	22.6	23.0	23.1	23.5	24.0
12H	4H	23.0	23.5	23.5	24.0	24.5	22.4	22.9	22.9	23.4	23.8
	6H	23.3	23.7	23.8	24.1	24.7	22.6	23.0	23.1	23.4	24.0
	8H	23.3	23.7	23.9	24.2	24.8	22.6	22.9	23.1	23.4	24.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0