

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-00763_1_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	1389
Efficacy	68.1 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.51
Two luminaires, plane 90°	0.51
Four luminaires	0.56

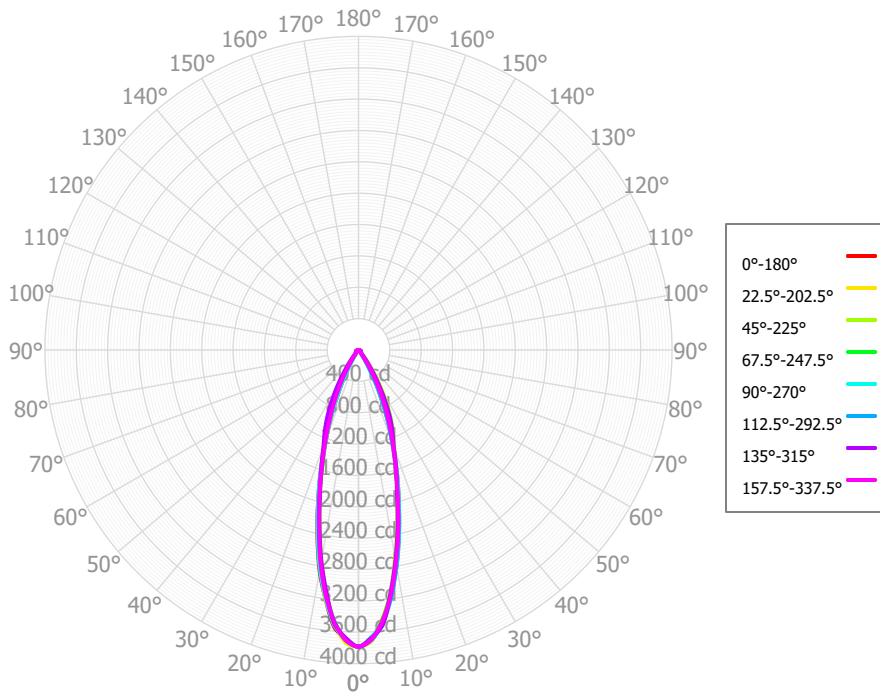
Full Beam Angle

0° - 180°	31°
90° - 270°	31°

IES File Header Contents

Keyword	Value
TEST	SP-00763_1_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 DLNFGN MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 31 degrees
OTHER	Narrow Flood optic, Open aperture / no lens
OTHER	Aluminum bezel
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°	312.42	22.49%	90.00° - 100.00°	0.11	0.01%
10.00° - 20.00°	531.61	38.27%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	353.74	25.46%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	99.53	7.17%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	27.03	1.95%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	21.22	1.53%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	29.86	2.15%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	10.90	0.78%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.74	0.20%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1389.05	99.99%	0.00° - 180.00°	1389.16	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°	3784.79	3784.79	3784.79	3784.79	3784.79	3784.79	3784.79	3784.79	3784.79	3784.79	3784.79	3784.79	3784.79	3784.79	3784.79	3784.79	3784.79
2.50°	3676.26	3722.46	3687.53	3698.44	3672.31	3702.93	3679.65	3707.01	3694.80	3739.57	3706.39	3710.10	3687.72	3707.92	3682.30	3700.30	3676.26
5.00°	3512.86	3454.70	3464.45	3462.18	3496.92	3489.62	3510.64	3493.76	3547.56	3495.35	3489.33	3488.01	3527.62	3504.06	3524.99	3475.58	3512.86
7.50°	3155.89	3150.98	3120.76	3147.77	3162.19	3159.33	3126.66	3173.12	3208.70	3211.42	3133.27	3173.09	3195.95	3188.40	3130.01	3156.69	3155.89
10.00°	2794.48	2740.94	2690.60	2738.90	2802.26	2765.79	2732.68	2774.77	2857.85	2783.74	2727.56	2768.98	2836.11	2782.66	2720.92	2752.90	2794.48
12.50°	2384.31	2333.82	2287.40	2329.75	2393.57	2329.58	2300.44	2329.81	2419.38	2339.78	2284.18	2326.31	2406.50	2364.32	2306.67	2342.70	2384.31
15.00°	1980.47	1933.46	1899.68	1920.31	1980.41	1933.65	1896.72	1925.91	1987.26	1933.85	1900.09	1919.47	1987.94	1937.66	1897.66	1927.70	1980.47
17.50°	1618.03	1571.30	1596.05	1585.87	1629.64	1559.45	1575.83	1541.51	1587.07	1530.04	1553.27	1524.98	1591.17	1578.44	1597.95	1585.48	1618.03
20.00°	1268.49	1278.67	1330.59	1310.79	1281.93	1271.66	1299.21	1234.74	1207.41	1228.16	1303.19	1216.77	1223.80	1255.19	1309.94	1287.08	1268.49
22.50°	977.06	1014.86	1141.47	1067.68	989.53	1021.09	1123.30	956.59	901.23	930.28	1101.47	930.59	903.24	982.11	1133.40	1033.30	977.06
25.00°	702.41	793.61	980.11	845.56	701.30	787.68	939.55	731.56	621.30	709.50	891.75	691.54	618.74	730.05	951.43	800.82	702.41
27.50°	482.56	588.65	793.26	627.19	471.06	560.04	741.75	521.85	411.97	494.14	678.87	460.85	380.40	508.17	738.18	594.07	482.56
30.00°	290.76	403.38	599.49	410.79	256.13	374.00	553.77	353.90	238.57	328.34	494.57	295.95	212.65	296.13	533.76	397.19	290.76
32.50°	169.81	252.84	432.15	254.98	157.53	198.30	380.08	194.58	142.69	178.19	319.03	138.78	119.07	179.03	365.42	251.44	169.81
35.00°	81.46	136.26	269.90	124.02	72.62	123.27	239.84	124.01	76.50	115.91	202.71	94.59	68.16	85.19	216.45	120.51	81.46
37.50°	58.48	71.55	167.57	73.00	56.69	66.51	139.43	65.36	60.97	63.50	99.57	56.67	54.06	59.73	126.85	74.61	58.48
40.00°	42.12	48.47	73.07	47.94	43.27	49.88	77.33	52.36	49.06	50.55	65.65	47.80	44.85	45.78	59.05	46.83	42.12
42.50°	36.30	35.06	48.65	38.00	38.82	37.76	52.19	42.95	42.12	39.72	42.34	39.07	39.03	38.49	42.45	37.33	36.30
45.00°	31.38	27.99	28.94	31.68	34.17	34.61	37.82	36.02	36.99	35.30	35.01	33.42	33.72	31.89	30.23	30.48	31.38
47.50°	27.62	23.95	26.01	28.37	29.01	31.92	31.98	29.30	33.92	30.94	29.13	28.00	28.69	27.33	26.35	25.88	27.62
50.00°	23.28	21.49	23.27	25.57	24.48	26.96	28.78	27.03	30.17	26.75	28.29	24.65	24.82	22.90	23.36	21.47	23.28
52.50°	18.32	19.92	21.34	23.75	21.32	22.26	27.31	24.92	25.78	23.97	27.62	21.88	21.49	22.05	21.68	20.81	18.32
55.00°	16.15	18.73	20.04	22.03	19.86	22.37	28.03	24.71	22.99	23.82	27.70	22.38	20.46	21.36	22.39	20.25	16.15
57.50°	16.38	20.87	25.36	24.41	21.32	23.10	29.89	25.27	21.39	25.64	28.07	23.75	20.23	23.15	26.00	20.42	16.38
60.00°	19.73	24.10	29.98	26.99	25.65	29.29	33.61	30.91	25.01	30.44	32.54	28.62	23.84	25.31	29.43	21.01	19.73
62.50°	25.28	27.58	30.33	31.16	34.00	34.85	38.09	35.76	31.84	33.65	36.26	32.30	28.51	30.52	32.66	26.67	25.28
65.00°	28.30	31.13	29.81	34.74	36.56	36.79	35.19	37.09	34.25	34.97	34.87	32.47	31.30	34.03	31.26	31.11	28.30
67.50°	29.87	28.16	25.54	29.31	32.56	35.37	30.03	34.63	34.62	30.11	30.47	29.11	33.64	29.11	26.08	27.70	29.87
70.00°	24.87	24.09	20.68	23.24	25.36	24.28	21.91	23.19	24.49	20.39	17.90	19.95	22.77	23.21	19.66	23.00	24.87
72.50°	17.54	17.15	14.46	14.54	15.81	15.54	14.08	13.82	13.47	11.49	10.32	12.46	13.19	15.25	12.62	14.90	17.54
75.00°	10.96	11.18	10.12	8.78	9.93	8.95	8.14	6.22	6.48	4.77	6.48	6.40	6.12	9.13	9.43	9.67	10.96
77.50°	7.31	7.05	7.21	5.95	5.94	5.75	5.18	4.58	4.58	3.23	4.57	3.82	4.30	4.79	7.11	6.61	7.31
80.00°	7.54	6.84	6.57	5.27	4.94	4.08	3.64	4.02	3.76	3.99	3.59	2.72	3.16	4.43	5.71	5.62	7.54
82.50°	4.96	5.41	5.31	4.51	3.68	3.02	2.63	3.09	2.27	2.52	2.90	2.28	2.16	3.40	3.94	4.89	4.96
85.00°	2.07	2.69	2.94	3.00	1.98	1.69	2.14	1.56	1.90	1.50	1.54	1.72	1.37	1.88	2.43	2.96	2.07
87.50°	1.64	1.61	1.62	2.38	1.31	1.62	1.69	2.17	1.53	1.54	1.20	1.63	1.70	1.69	1.58	1.88	1.64
90.00°	1.29	1.17	1.44	2.18	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47	1.78	1.70	1.29
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	1654	1654	1654	1654	1615	1615	1615	1615	1543	1543	1543	1478	1478	1478	1417	1417	1389
	1	1583	1547	1515	1486	1549	1517	1489	1463	1461	1439	1418	1410	1392	1376	1363	1349	1322
	2	1515	1454	1403	1360	1485	1430	1384	1345	1386	1348	1315	1345	1314	1288	1307	1283	1258
	3	1452	1372	1311	1262	1425	1353	1297	1251	1318	1271	1232	1285	1246	1213	1254	1222	1199
	4	1393	1301	1233	1182	1369	1285	1223	1175	1257	1203	1161	1230	1185	1148	1205	1167	1145
	5	1338	1237	1167	1115	1317	1225	1159	1110	1201	1144	1101	1179	1130	1091	1158	1116	1096
	6	1287	1181	1109	1058	1268	1170	1103	1055	1151	1092	1048	1132	1080	1041	1115	1070	1052
	7	1239	1129	1058	1008	1222	1121	1053	1006	1104	1044	1000	1089	1035	995	1074	1027	1010
	8	1195	1083	1012	964	1180	1075	1008	962	1061	1001	958	1048	994	954	1036	987	972
	9	1153	1040	970	924	1139	1033	967	922	1022	961	919	1010	956	916	1000	950	936
	10	1114	1000	932	887	1101	995	930	886	985	925	884	975	920	882	966	916	903

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	125.1 fc	3.1 ft
6.5 ft	89.6 fc	3.6 ft
7.5 ft	67.3 fc	4.2 ft
8.0 ft	59.1 fc	4.5 ft
10.0 ft	37.8 fc	5.6 ft
12.0 ft	26.3 fc	6.7 ft
14.0 ft	19.3 fc	7.8 ft
16.0 ft	14.8 fc	8.9 ft
20.0 ft	9.5 fc	11.2 ft
24.0 ft	6.6 fc	13.4 ft
28.0 ft	4.8 fc	15.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1591374	1591374	1591374
45.00°	18659	17208	20319
55.00°	11835	14691	14562
65.00°	28158	29654	36378
75.00°	17807	16443	16137
85.00°	9973	14178	9556

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	14.1	15.1	14.5	15.4	15.7	15.2	16.2	15.6	16.5	16.8
	3H	19.1	20.0	19.5	20.3	20.7	19.7	20.6	20.1	20.9	21.3
	4H	19.7	20.5	20.1	20.8	21.2	19.9	20.8	20.4	21.1	21.5
	6H	19.9	20.6	20.3	21.0	21.4	20.0	20.7	20.4	21.1	21.5
	8H	20.0	20.7	20.5	21.1	21.5	20.0	20.7	20.4	21.1	21.5
	12H	20.1	20.7	20.5	21.1	21.5	20.0	20.6	20.4	21.0	21.4
4H	2H	16.4	17.2	16.8	17.6	18.0	17.4	18.2	17.8	18.6	19.0
	3H	20.2	20.8	20.6	21.3	21.7	20.7	21.3	21.1	21.8	22.2
	4H	20.7	21.3	21.1	21.7	22.2	20.9	21.5	21.3	21.9	22.4
	6H	21.0	21.5	21.5	22.0	22.4	21.0	21.5	21.4	21.9	22.4
	8H	21.1	21.6	21.6	22.1	22.5	21.0	21.4	21.4	21.9	22.4
	12H	21.2	21.6	21.7	22.1	22.6	20.9	21.4	21.4	21.8	22.3
8H	4H	20.8	21.2	21.2	21.7	22.2	20.9	21.4	21.4	21.8	22.3
	6H	21.2	21.5	21.7	22.1	22.5	21.0	21.3	21.5	21.8	22.3
	8H	21.4	21.7	21.9	22.3	22.8	21.0	21.3	21.5	21.8	22.3
	12H	21.5	21.8	22.1	22.3	22.9	21.0	21.3	21.6	21.8	22.4
12H	4H	20.7	21.1	21.2	21.6	22.1	20.8	21.2	21.3	21.7	22.2
	6H	21.2	21.5	21.7	22.0	22.5	20.9	21.3	21.5	21.7	22.3
	8H	21.5	21.7	22.0	22.2	22.8	21.0	21.3	21.5	21.8	22.3

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0