

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 DLNFGP MW
Nom 3" Square Infinium recessed downlight

Test Number

SP-00763_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	1393
Efficacy	68.27 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°	0.52
Four luminaires	0.57

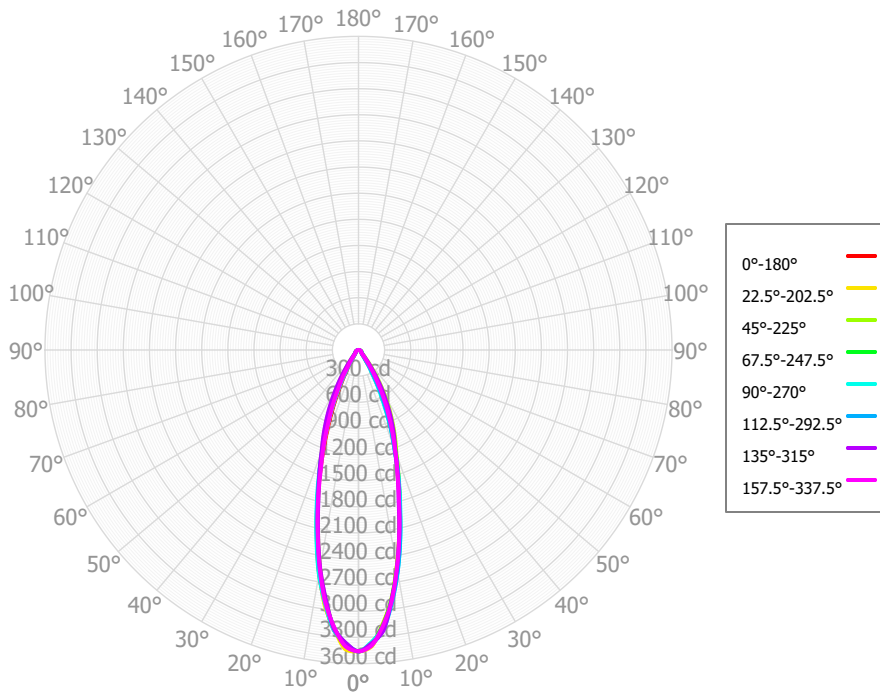
Full Beam Angle

0° - 180°	31°
90° - 270°	32°

IES File Header Contents

Keyword	Value
TEST	SP-00763_2_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 DLNFGP MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 31 degrees
OTHER	Narrow Flood optic, Solite 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°	287.52	20.65%	90.00° - 100.00°	0.12	0.01%
10.00° - 20.00°	499.18	35.84%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	350.89	25.20%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	128.91	9.26%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	44.25	3.18%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	34.69	2.49%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	28.54	2.05%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	15.16	1.09%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	3.39	0.24%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1392.53	99.99%	0.00° - 180.00°	1392.65	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°	3459.71	3459.71	3459.71	3459.71	3459.71	3459.71	3459.71	3459.71	3459.71	3459.71	3459.71	3459.71	3459.71	3459.71	3459.71	3459.71	3459.71
2.50°	3375.82	3408.84	3367.17	3381.49	3360.59	3373.34	3365.98	3407.54	3389.10	3439.62	3373.31	3402.07	3373.13	3384.54	3374.47	3400.10	3375.82
5.00°	3199.78	3163.55	3201.52	3176.32	3210.52	3209.48	3218.01	3195.53	3229.60	3209.04	3209.44	3207.13	3233.05	3232.85	3241.04	3185.24	3199.78
7.50°	2904.65	2898.34	2887.05	2901.59	2908.80	2901.17	2883.65	2924.11	2941.77	2963.82	2889.04	2928.47	2937.35	2932.01	2897.57	2913.26	2904.65
10.00°	2559.22	2527.36	2531.22	2539.78	2584.86	2563.17	2540.03	2555.61	2606.42	2579.51	2542.16	2572.05	2616.67	2588.27	2549.53	2536.45	2559.22
12.50°	2196.08	2161.65	2165.56	2180.23	2218.36	2174.67	2148.08	2161.97	2211.57	2194.13	2149.08	2182.77	2228.90	2208.67	2159.56	2164.25	2196.08
15.00°	1827.18	1816.19	1797.89	1822.99	1848.33	1814.51	1779.18	1797.87	1829.32	1823.27	1792.36	1821.57	1855.51	1821.44	1778.69	1799.06	1827.18
17.50°	1518.13	1494.82	1528.54	1515.71	1530.11	1493.17	1495.86	1439.17	1460.30	1460.03	1487.47	1469.88	1512.81	1507.59	1500.01	1484.83	1518.13
20.00°	1223.83	1242.90	1272.39	1249.84	1214.28	1211.70	1236.30	1168.87	1138.20	1176.05	1229.87	1193.94	1195.49	1204.50	1235.76	1233.32	1223.83
22.50°	976.80	1006.73	1096.20	1017.70	952.13	975.28	1045.67	908.71	856.15	902.69	1027.00	937.11	921.30	971.87	1065.47	1009.05	976.80
25.00°	738.12	806.35	926.42	808.90	694.51	756.71	860.10	706.62	622.63	697.02	836.29	728.80	675.62	745.08	895.91	812.04	738.12
27.50°	545.42	618.44	764.04	618.28	496.53	554.81	685.92	508.14	422.69	502.14	657.20	529.07	469.62	560.06	729.61	630.13	545.42
30.00°	357.77	453.35	602.29	437.77	310.83	390.67	521.54	367.00	280.83	355.34	498.30	380.57	307.84	377.58	566.48	460.89	357.77
32.50°	246.05	312.36	455.96	303.50	213.61	255.16	374.62	229.47	172.34	225.51	355.33	238.14	196.75	262.30	414.04	324.02	246.05
35.00°	138.39	206.83	313.60	189.64	127.58	168.78	252.73	161.07	115.20	151.01	246.64	168.10	124.28	152.13	278.58	209.17	138.39
37.50°	101.90	131.40	221.80	128.83	97.75	112.94	167.84	96.91	81.52	92.16	159.82	102.24	87.86	109.36	186.75	136.79	101.90
40.00°	66.88	92.40	136.75	86.86	71.99	81.79	108.17	76.59	65.33	73.02	108.25	81.76	66.65	70.40	114.01	87.61	66.88
42.50°	56.65	67.29	99.27	66.71	60.84	63.09	78.74	58.29	55.36	58.00	74.99	61.96	57.14	59.74	79.73	63.32	56.65
45.00°	46.85	56.04	66.54	52.38	51.41	52.81	59.83	52.46	47.82	51.30	59.02	54.86	50.55	50.02	55.63	50.15	46.85
47.50°	41.05	48.30	56.18	47.23	46.64	45.86	51.32	46.70	40.96	45.77	50.24	48.05	45.82	44.94	48.43	43.39	41.05
50.00°	36.02	43.40	47.97	43.86	42.06	41.70	46.47	41.25	38.40	42.12	45.37	44.10	41.14	40.43	43.87	38.85	36.02
52.50°	35.56	41.07	47.39	41.68	37.91	38.41	44.59	36.92	36.69	39.45	41.76	40.56	36.49	37.93	42.85	37.57	35.56
55.00°	35.06	40.46	46.20	39.64	35.98	37.95	42.98	36.21	36.44	38.06	39.50	39.46	34.58	36.02	40.80	37.15	35.06
57.50°	34.42	39.27	43.33	39.61	37.91	38.15	41.53	35.42	36.39	36.28	37.57	38.22	33.78	35.72	37.62	36.24	34.42
60.00°	33.64	37.77	40.02	39.72	38.17	35.91	37.59	34.42	33.63	34.06	35.13	36.44	32.35	34.24	34.60	35.25	33.64
62.50°	32.43	34.25	35.76	34.02	36.07	33.28	32.31	32.52	30.65	30.71	32.60	33.92	30.73	30.12	31.72	32.71	32.43
65.00°	30.78	29.86	31.65	28.38	32.95	27.77	28.52	28.87	27.38	26.37	27.73	29.09	28.12	26.20	28.52	29.97	30.78
67.50°	28.08	26.67	27.80	26.49	28.65	22.11	25.35	24.17	23.97	22.88	22.73	24.82	25.28	22.64	25.08	26.67	28.08
70.00°	24.27	23.86	24.36	24.17	24.36	19.88	20.71	18.18	19.68	19.89	18.80	21.56	20.44	18.92	21.75	23.33	24.27
72.50°	18.89	20.41	21.34	19.97	20.07	17.08	16.05	13.98	14.89	16.48	15.70	17.95	16.03	15.04	18.47	19.90	18.89
75.00°	15.01	17.08	19.26	16.73	16.70	13.16	12.26	10.71	9.49	13.07	13.85	14.16	12.87	11.97	15.91	16.21	15.01
77.50°	11.90	14.24	16.96	14.43	12.69	9.42	9.20	8.54	6.66	9.77	10.35	10.54	9.73	9.16	12.25	12.15	11.90
80.00°	9.31	9.99	12.46	10.45	6.93	6.43	6.55	5.23	5.12	6.98	6.60	6.13	6.41	6.53	7.00	8.64	9.31
82.50°	5.64	6.16	7.62	5.25	3.45	4.18	4.21	3.10	3.35	3.28	3.57	2.99	3.16	3.46	4.63	5.36	5.64
85.00°	2.50	3.39	3.47	1.92	1.83	2.23	2.59	1.74	1.85	2.36	1.98	1.80	1.49	1.87	2.62	2.53	2.50
87.50°	1.41	1.73	1.63	1.52	1.56	1.81	2.09	1.66	1.86	1.45	1.96	1.70	1.80	1.71	1.02	1.93	1.41
90.00°	1.55	1.71	1.67	1.81	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.91	1.76	1.98	1.55
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	1619	1619	1619	1619	1547	1547	1547	1481	1481	1481	1421	1421	1393
	1	1583	1546	1512	1482	1549	1516	1485	1458	1459	1435	1413	1408	1389	1371	1360	1345	1332
	2	1511	1446	1393	1348	1480	1422	1374	1333	1378	1338	1304	1336	1304	1276	1298	1272	1249
	3	1444	1360	1295	1244	1416	1341	1281	1233	1305	1255	1214	1271	1230	1195	1240	1206	1177
	4	1381	1284	1213	1159	1357	1269	1203	1152	1239	1183	1139	1212	1164	1126	1187	1146	1113
	5	1323	1217	1143	1089	1301	1204	1135	1084	1180	1120	1074	1158	1106	1065	1137	1092	1056
	6	1269	1157	1082	1028	1250	1147	1076	1025	1127	1064	1018	1108	1053	1011	1090	1042	1005
	7	1219	1103	1028	976	1202	1094	1024	973	1078	1014	968	1062	1005	963	1047	997	959
	8	1172	1054	980	929	1157	1047	977	928	1033	969	924	1019	962	920	1006	955	917
	9	1129	1010	937	888	1115	1004	934	887	991	928	884	980	922	881	969	917	878
	10	1088	969	898	850	1075	964	895	849	953	890	847	943	886	845	934	881	843

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	114.4 fc	3.1 ft
6.5 ft	81.9 fc	3.7 ft
7.5 ft	61.5 fc	4.3 ft
8.0 ft	54.1 fc	4.5 ft
10.0 ft	34.6 fc	5.7 ft
12.0 ft	24.0 fc	6.8 ft
14.0 ft	17.7 fc	8.0 ft
16.0 ft	13.5 fc	9.1 ft
20.0 ft	8.6 fc	11.4 ft
24.0 ft	6.0 fc	13.6 ft
28.0 ft	4.4 fc	15.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1454687	1454687	1454687
45.00°	27858	39568	30567
55.00°	25700	33865	26376
65.00°	30623	31489	32782
75.00°	24382	31284	27133
85.00°	12072	16758	8813

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	18.4	19.4	18.7	19.7	20.0	18.5	19.5	18.8	19.8	20.1
	3H	20.5	21.4	20.8	21.7	22.1	20.2	21.1	20.6	21.5	21.8
	4H	21.1	21.9	21.5	22.3	22.7	20.8	21.6	21.2	22.0	22.4
	6H	21.5	22.3	21.9	22.7	23.1	21.1	21.9	21.5	22.2	22.6
	8H	21.6	22.3	22.1	22.7	23.1	21.1	21.8	21.6	22.2	22.6
	12H	21.6	22.3	22.1	22.7	23.1	21.1	21.8	21.5	22.2	22.6
4H	2H	19.0	19.9	19.4	20.2	20.6	19.0	19.8	19.4	20.2	20.6
	3H	21.3	21.9	21.7	22.3	22.8	20.9	21.6	21.3	22.0	22.4
	4H	22.0	22.6	22.5	23.1	23.5	21.5	22.2	22.0	22.6	23.0
	6H	22.6	23.1	23.0	23.6	24.0	21.9	22.4	22.4	22.9	23.4
	8H	22.7	23.2	23.2	23.6	24.1	21.9	22.4	22.4	22.9	23.4
	12H	22.7	23.2	23.2	23.6	24.1	21.9	22.4	22.4	22.8	23.3
8H	4H	22.3	22.8	22.8	23.2	23.7	21.7	22.2	22.1	22.6	23.1
	6H	23.0	23.4	23.5	23.9	24.3	22.1	22.5	22.6	23.0	23.5
	8H	23.2	23.5	23.7	24.0	24.5	22.2	22.5	22.7	23.0	23.5
	12H	23.2	23.5	23.8	24.0	24.6	22.2	22.5	22.7	23.0	23.6
12H	4H	22.3	22.7	22.8	23.2	23.7	21.6	22.1	22.1	22.5	23.0
	6H	23.0	23.3	23.5	23.8	24.4	22.1	22.4	22.6	22.9	23.5
	8H	23.2	23.5	23.7	24.0	24.6	22.2	22.5	22.7	23.0	23.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0