

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-00764_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	1422
Efficacy	69.73 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.39
Two luminaires, plane 90°	0.41
Four luminaires	0.43

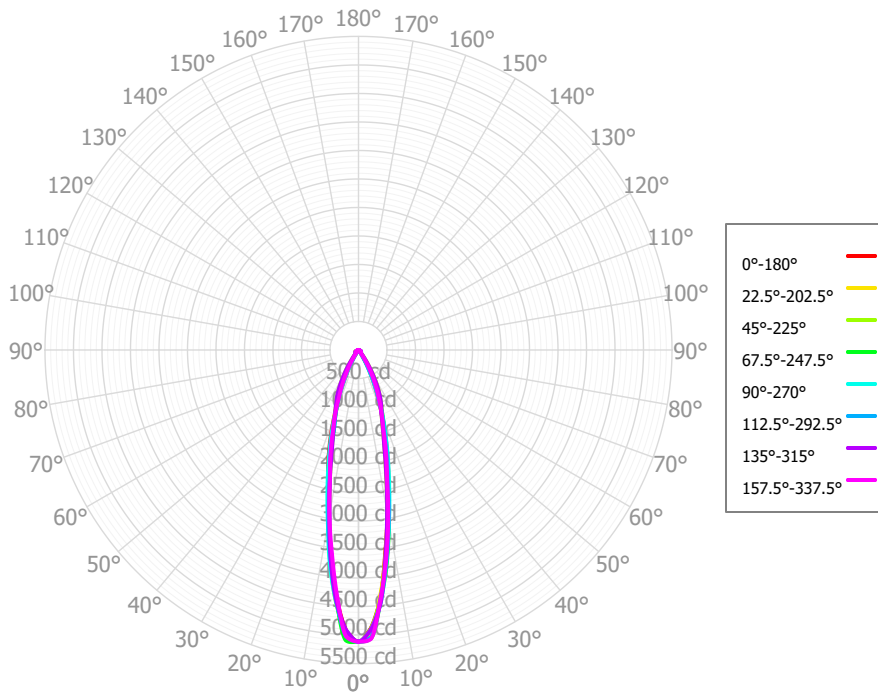
Full Beam Angle

0° - 180°	24°
90° - 270°	24°

IES File Header Contents

Keyword	Value
TEST	SP-00764_1_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 DLSPGN MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 24 degrees
OTHER	Spot optic, Open aperture / no lens
OTHER	Aluminum bezel
LAMPCAT	N/A
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°	376.37	26.46%	90.00° - 100.00°	0.13	0.01%
10.00° - 20.00°	524.04	36.84%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	332.88	23.40%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	89.68	6.30%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	16.75	1.18%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	36.41	2.56%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	32.37	2.28%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	9.78	0.69%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	3.98	0.28%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1422.27	99.99%	0.00° - 180.00°	1422.40	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°	5115.47	5115.47	5115.47	5115.47	5115.47	5115.47	5115.47	5115.47	5115.47	5115.47	5115.47	5115.47	5115.47	5115.47	5115.47	5115.47	5115.47
2.50°	4893.43	5015.40	4904.65	5061.90	4916.61	5020.08	4922.88	5027.76	4930.09	5049.08	4978.03	5098.92	4959.20	5048.06	4914.90	5070.88	4893.43
5.00°	4395.11	4345.06	4396.26	4425.79	4453.84	4419.36	4436.62	4324.37	4388.71	4389.72	4466.70	4411.54	4456.57	4406.01	4456.39	4396.42	4395.11
7.50°	3592.30	3672.35	3623.59	3784.28	3727.57	3732.51	3727.21	3583.46	3729.37	3651.50	3784.81	3724.22	3819.24	3749.74	3635.79	3716.66	3592.30
10.00°	2934.31	2988.82	2904.95	3063.34	3072.37	3032.17	2918.76	2946.45	2994.22	2978.48	2965.27	3038.38	3089.13	3038.28	2888.90	2997.37	2934.31
12.50°	2428.02	2353.76	2231.65	2368.40	2486.81	2330.20	2317.54	2313.68	2461.57	2311.29	2323.25	2366.63	2508.62	2382.95	2250.47	2317.44	2428.02
15.00°	1968.16	1901.89	1745.80	1924.80	1994.78	1861.17	1794.46	1900.97	2043.40	1880.51	1807.98	1891.07	2018.97	1906.97	1745.39	1863.91	1968.16
17.50°	1550.82	1488.96	1397.16	1504.07	1582.87	1411.73	1463.76	1492.82	1636.54	1461.78	1455.47	1435.08	1591.80	1482.26	1413.76	1445.64	1550.82
20.00°	1195.85	1197.43	1177.10	1239.98	1223.43	1168.43	1195.07	1186.70	1235.18	1181.84	1203.99	1161.08	1197.43	1197.32	1174.18	1186.14	1195.85
22.50°	891.49	930.10	1040.16	981.89	903.81	934.61	1026.60	887.86	915.21	905.64	1022.41	895.39	887.42	929.62	1039.13	939.95	891.49
25.00°	640.84	727.31	883.18	755.92	633.83	730.19	884.80	677.15	629.72	703.60	878.97	685.04	616.07	701.82	880.71	742.27	640.84
27.50°	428.19	533.33	714.97	537.18	396.64	526.70	707.27	471.88	420.14	503.42	706.32	480.71	402.68	488.38	698.75	550.87	428.19
30.00°	266.42	359.28	537.50	349.14	235.64	349.32	521.88	312.38	237.78	339.69	519.96	307.88	211.90	303.86	518.12	378.80	266.42
32.50°	136.42	212.30	355.50	184.98	118.97	177.40	361.38	166.18	144.52	183.30	358.39	156.65	123.07	160.67	338.67	226.86	136.42
35.00°	74.43	118.71	221.65	105.03	66.66	110.14	205.15	101.73	77.92	112.84	206.90	95.02	68.34	89.18	202.56	126.97	74.43
37.50°	49.17	52.01	107.99	42.50	46.66	47.38	125.38	46.28	52.90	49.09	123.97	45.32	47.73	41.23	99.78	52.01	49.17
40.00°	33.15	31.08	56.12	30.98	33.48	34.18	55.70	34.81	38.29	38.34	64.61	36.06	36.57	28.71	45.97	32.86	33.15
42.50°	21.49	17.99	26.17	21.61	23.23	22.02	35.33	24.69	28.71	28.19	38.39	27.49	28.02	20.13	25.43	18.95	21.49
45.00°	14.91	16.49	17.43	17.56	16.87	17.64	19.42	19.84	20.12	21.66	21.65	20.87	20.07	16.79	15.91	15.11	14.91
47.50°	10.38	16.01	15.08	15.83	11.95	14.94	18.80	17.28	17.26	16.80	18.46	17.03	16.16	15.80	12.87	13.33	10.38
50.00°	13.77	16.89	21.09	19.04	17.74	22.02	18.97	22.28	15.30	19.74	18.51	19.91	12.99	17.55	16.26	15.05	13.77
52.50°	19.89	24.62	29.17	26.23	26.86	31.12	37.09	31.32	29.23	26.52	33.56	27.99	24.07	25.45	22.99	21.54	19.89
55.00°	33.64	40.18	39.98	40.74	39.89	49.41	55.34	51.46	44.99	48.16	51.44	47.05	37.10	39.67	35.51	35.03	33.64
57.50°	49.59	47.64	51.35	49.12	53.92	62.65	58.97	64.07	55.86	63.61	57.05	58.49	46.81	48.11	50.59	44.66	49.59
60.00°	49.25	46.92	46.01	47.58	52.45	56.96	61.79	59.13	66.34	59.37	60.84	56.09	56.19	51.36	48.14	49.37	49.25
62.50°	45.10	40.12	38.08	41.00	47.71	48.60	47.36	49.89	54.29	51.11	46.95	47.91	48.72	46.03	38.96	45.22	45.10
65.00°	35.28	27.94	27.95	27.31	34.68	32.00	33.00	31.94	41.28	32.15	31.21	30.49	40.23	33.84	28.53	31.06	35.28
67.50°	24.39	19.06	17.56	17.64	20.25	18.53	19.23	18.28	26.83	17.73	19.24	17.96	26.11	22.46	17.71	20.12	24.39
70.00°	18.07	12.47	11.05	12.40	15.70	11.30	8.73	10.52	14.28	11.44	8.71	10.93	14.48	11.57	10.50	12.04	18.07
72.50°	13.09	10.32	6.13	9.64	12.18	7.75	6.33	7.85	9.13	7.99	5.31	8.24	13.02	9.10	4.69	9.80	13.09
75.00°	12.98	9.82	6.56	8.26	10.59	6.87	6.28	7.73	7.49	6.44	4.11	7.48	12.26	8.85	6.33	10.08	12.98
77.50°	16.46	11.49	8.54	10.11	11.39	7.00	6.97	7.19	8.45	5.85	4.88	7.63	11.95	8.97	7.93	12.14	16.46
80.00°	18.78	12.11	9.21	9.13	11.59	7.65	5.79	6.69	9.73	5.24	5.77	8.05	11.27	9.06	8.78	12.49	18.78
82.50°	8.15	8.40	3.85	6.09	3.26	6.06	3.69	4.35	4.30	3.81	3.54	5.04	3.51	6.54	5.33	8.88	8.15
85.00°	1.49	2.74	2.49	3.05	1.30	2.85	2.10	2.06	2.18	1.86	2.40	1.68	2.41	2.41	3.30	2.99	1.49
87.50°	1.39	1.60	1.93	1.54	1.54	1.93	1.75	2.49	1.85	2.09	2.00	1.58	1.61	1.83	2.13	2.19	1.39
90.00°	2.10	2.17	1.84	1.32	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.85	1.84	2.12	2.10
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	1693	1693	1693	1693	1654	1654	1654	1654	1580	1580	1580	1513	1513	1513	1451	1451	1422
	1	1622	1586	1553	1524	1587	1555	1526	1500	1498	1475	1454	1445	1427	1410	1397	1383	1355
	2	1554	1492	1440	1397	1523	1467	1421	1381	1422	1384	1351	1380	1350	1323	1342	1317	1292
	3	1490	1410	1348	1299	1463	1391	1334	1288	1355	1307	1268	1321	1282	1248	1290	1257	1234
	4	1432	1339	1271	1220	1408	1324	1261	1213	1294	1241	1199	1267	1222	1185	1241	1203	1181
	5	1378	1277	1206	1154	1356	1264	1198	1149	1240	1183	1139	1217	1168	1130	1196	1154	1134
	6	1327	1221	1150	1098	1308	1210	1143	1095	1190	1132	1088	1172	1120	1081	1154	1109	1090
	7	1281	1171	1100	1050	1264	1162	1095	1047	1145	1085	1042	1130	1076	1037	1115	1068	1050
	8	1237	1125	1055	1007	1222	1118	1051	1005	1104	1044	1001	1090	1036	997	1078	1029	1014
	9	1196	1084	1015	968	1183	1077	1012	967	1065	1006	964	1054	1000	961	1043	994	979
	10	1158	1046	978	933	1146	1040	976	932	1030	971	930	1020	966	928	1011	961	948

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	169.1 fc	2.3 ft
6.5 ft	121.1 fc	2.8 ft
7.5 ft	90.9 fc	3.2 ft
8.0 ft	79.9 fc	3.4 ft
10.0 ft	51.2 fc	4.3 ft
12.0 ft	35.5 fc	5.1 ft
14.0 ft	26.1 fc	6.0 ft
16.0 ft	20.0 fc	6.8 ft
20.0 ft	12.8 fc	8.5 ft
24.0 ft	8.9 fc	10.2 ft
28.0 ft	6.5 fc	11.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	2150877	2150877	2150877
45.00°	8865	10363	10029
55.00°	24662	29308	29238
65.00°	35100	27805	34501
75.00°	21087	10649	17197
85.00°	7173	12004	6274

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	20.0	20.9	20.3	21.3	21.6	21.5	22.5	21.9	22.8	23.1
	3H	20.7	21.6	21.1	21.9	22.3	21.8	22.7	22.2	23.0	23.4
	4H	21.0	21.8	21.4	22.1	22.5	21.9	22.7	22.3	23.1	23.5
	6H	21.9	22.7	22.4	23.1	23.5	22.2	23.0	22.6	23.3	23.7
	8H	22.2	22.9	22.7	23.3	23.7	22.3	22.9	22.7	23.3	23.8
	12H	22.3	22.9	22.7	23.3	23.8	22.2	22.9	22.7	23.3	23.7
4H	2H	20.2	21.0	20.6	21.4	21.8	21.7	22.5	22.1	22.9	23.2
	3H	21.0	21.6	21.4	22.0	22.4	22.0	22.7	22.4	23.1	23.5
	4H	21.3	21.9	21.7	22.3	22.8	22.1	22.7	22.6	23.1	23.6
	6H	22.6	23.1	23.0	23.5	24.0	22.5	23.0	23.0	23.5	24.0
	8H	22.9	23.4	23.4	23.9	24.3	22.6	23.1	23.1	23.5	24.0
	12H	23.0	23.4	23.5	23.9	24.4	22.6	23.0	23.1	23.5	24.0
8H	4H	21.3	21.8	21.8	22.2	22.7	22.0	22.5	22.5	22.9	23.4
	6H	22.7	23.1	23.3	23.6	24.1	22.5	22.9	23.0	23.4	23.9
	8H	23.3	23.6	23.8	24.1	24.6	22.7	23.0	23.2	23.5	24.0
	12H	23.4	23.7	23.9	24.2	24.7	22.7	23.0	23.2	23.5	24.1
12H	4H	21.3	21.7	21.8	22.2	22.7	22.0	22.4	22.5	22.9	23.4
	6H	22.8	23.1	23.3	23.6	24.1	22.5	22.8	23.0	23.3	23.8
	8H	23.3	23.6	23.8	24.1	24.7	22.7	23.0	23.2	23.5	24.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0