

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-00765_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	1495
Efficacy	73.28 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	0.9

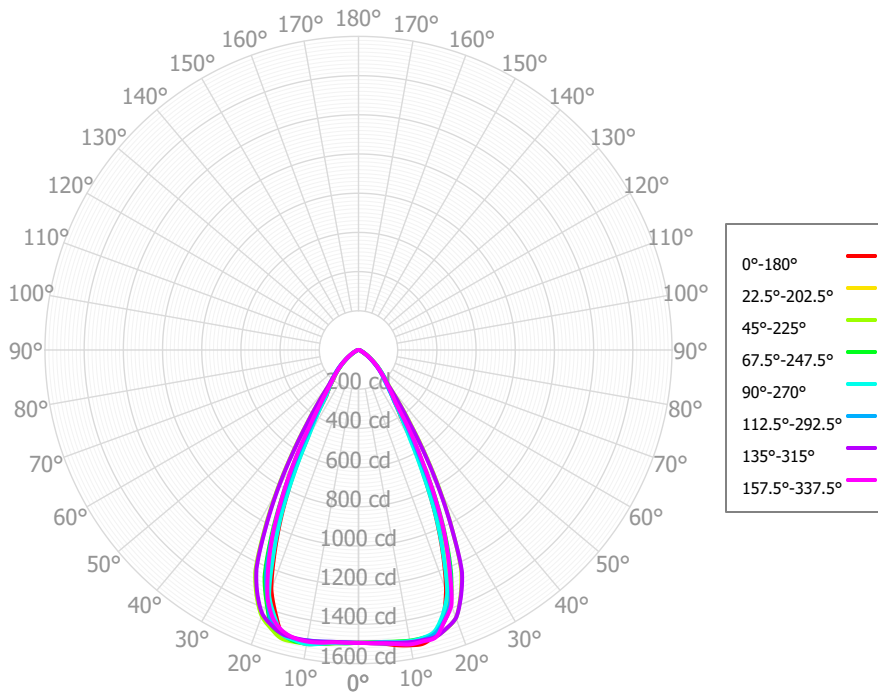
Full Beam Angle

0° - 180°	54°
90° - 270°	54°

IES File Header Contents

Keyword	Value
TEST	SP-00765_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 DLWFGN MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 54 degrees
OTHER	Wide 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°	146.02	9.77%	90.00° - 100.00°	0.10	0.01%
10.00° - 20.00°	417.07	27.90%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	470.04	31.44%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	240.11	16.06%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	125.50	8.39%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	62.41	4.17%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	22.93	1.53%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	8.41	0.56%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.35	0.16%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1494.84	99.99%	0.00° - 180.00°	1494.94	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°	1494.66	1494.66	1494.66	1494.66	1494.66	1494.66	1494.66	1494.66	1494.66	1494.66	1494.66	1494.66	1494.66	1494.66	1494.66	1494.66	1494.66
2.50°	1497.55	1495.11	1496.54	1493.28	1495.45	1492.83	1493.94	1495.34	1496.48	1495.21	1499.22	1496.51	1498.73	1497.60	1496.00	1498.55	1497.55
5.00°	1505.04	1500.83	1496.11	1496.34	1495.40	1495.59	1495.19	1498.03	1500.86	1501.57	1501.39	1503.38	1501.04	1503.64	1499.15	1503.56	1505.04
7.50°	1519.87	1509.14	1502.92	1500.54	1502.95	1500.53	1500.66	1506.53	1511.03	1512.26	1511.85	1512.36	1512.92	1510.46	1506.81	1513.88	1519.87
10.00°	1530.14	1519.10	1509.48	1506.21	1508.81	1504.69	1505.43	1510.85	1523.41	1517.70	1521.70	1517.81	1524.40	1518.25	1514.13	1525.31	1530.14
12.50°	1534.15	1519.05	1513.84	1505.94	1505.84	1508.52	1505.46	1506.26	1515.29	1518.59	1525.26	1521.84	1516.40	1515.17	1516.86	1523.18	1534.15
15.00°	1503.60	1513.84	1514.17	1499.26	1489.41	1489.98	1500.82	1487.13	1500.97	1496.76	1523.43	1501.68	1502.97	1500.46	1516.25	1519.15	1503.60
17.50°	1434.31	1449.30	1491.44	1454.41	1422.81	1464.21	1473.75	1442.34	1409.29	1458.87	1488.64	1473.95	1425.75	1450.26	1490.67	1454.92	1434.31
20.00°	1306.64	1359.81	1454.56	1375.48	1323.45	1357.49	1433.78	1354.25	1300.46	1353.30	1444.44	1371.80	1333.17	1369.15	1454.73	1386.04	1306.64
22.50°	1125.55	1202.96	1360.94	1234.90	1131.92	1231.33	1348.87	1204.50	1118.70	1207.90	1358.62	1252.04	1136.97	1223.49	1364.88	1215.31	1125.55
25.00°	930.54	1024.23	1240.42	1049.51	932.06	1031.54	1231.85	1033.82	925.97	1027.61	1245.09	1053.52	935.99	1031.38	1249.07	1041.02	930.54
27.50°	724.85	831.59	1037.85	845.63	713.27	818.73	1029.69	838.90	725.88	830.92	1041.46	841.73	712.13	823.14	1036.62	840.91	724.85
30.00°	553.58	635.60	836.98	630.71	528.42	620.52	827.96	651.72	525.09	642.00	838.57	638.06	511.13	605.39	827.55	643.60	553.58
32.50°	403.72	482.86	640.24	474.33	404.81	423.93	627.19	472.07	404.09	455.98	637.54	435.23	389.58	449.16	627.98	481.89	403.72
35.00°	319.33	337.81	467.81	346.34	313.54	340.21	454.28	347.09	287.21	344.80	460.45	338.77	289.91	321.97	452.42	332.37	319.33
37.50°	267.60	279.26	341.64	277.20	269.35	262.29	329.16	265.50	246.65	255.41	332.07	247.54	248.18	255.77	331.32	275.26	267.60
40.00°	230.28	230.35	247.82	230.49	232.14	227.21	237.82	214.08	207.04	212.29	235.42	213.19	211.08	212.54	238.45	222.67	230.28
42.50°	198.83	198.96	204.23	197.16	203.43	192.77	194.03	182.09	182.98	178.99	190.49	179.26	183.93	182.86	196.49	192.58	198.83
45.00°	170.13	168.49	168.40	167.79	174.35	167.02	159.01	155.01	158.58	152.82	153.66	153.11	156.30	157.14	160.37	163.69	170.13
47.50°	142.29	142.19	142.49	141.69	144.90	141.18	134.20	130.56	131.30	127.71	127.55	127.43	127.83	131.10	132.76	139.09	142.29
50.00°	114.28	116.06	116.84	116.32	117.78	114.49	111.26	108.23	104.84	104.35	104.35	106.02	102.43	104.99	107.72	114.74	114.28
52.50°	86.23	93.12	91.46	92.77	92.56	88.89	90.10	86.81	82.75	81.14	84.37	84.83	81.35	84.42	85.81	91.12	86.23
55.00°	68.98	70.97	70.58	69.49	71.85	70.10	70.75	69.61	62.69	63.27	66.38	65.00	63.13	64.67	67.07	69.77	68.98
57.50°	53.55	56.43	53.60	54.03	54.19	52.54	52.83	53.81	50.66	45.70	50.21	46.88	48.23	50.29	51.47	53.43	53.55
60.00°	41.90	42.53	40.43	39.29	41.25	40.24	39.25	42.26	39.12	36.12	37.77	35.78	36.47	36.38	38.83	39.13	41.90
62.50°	30.64	32.64	29.97	30.42	30.89	29.22	28.48	31.80	29.00	26.79	28.08	25.96	27.70	27.13	28.58	28.45	30.64
65.00°	23.64	23.72	22.46	21.88	24.12	22.22	21.23	23.55	20.91	20.97	20.46	20.16	21.22	18.23	21.62	20.11	23.64
67.50°	17.05	18.64	16.64	16.89	18.90	16.17	15.73	15.69	17.17	15.75	14.05	15.32	16.45	16.37	16.87	15.05	17.05
70.00°	14.53	14.28	13.05	12.41	15.13	11.91	11.54	12.76	13.42	13.32	10.90	12.31	12.68	14.24	12.36	11.48	14.53
72.50°	11.76	11.20	10.21	10.12	11.80	9.08	7.86	10.04	9.64	10.78	8.76	9.86	9.43	10.84	7.94	9.07	11.76
75.00°	8.42	8.64	8.00	8.10	9.55	7.18	5.51	7.45	8.06	8.08	7.27	7.80	8.11	7.82	6.83	6.84	8.42
77.50°	6.44	6.46	5.95	6.27	6.94	5.66	4.47	5.49	6.39	5.92	5.89	5.82	5.76	5.24	5.32	5.01	6.44
80.00°	4.83	4.86	4.22	4.19	4.09	4.23	3.94	4.08	3.82	4.08	4.32	4.02	3.26	4.50	3.43	3.76	4.83
82.50°	3.10	3.02	3.45	3.12	1.99	2.71	2.87	3.14	2.07	2.88	2.36	2.53	2.16	3.00	2.47	2.70	3.10
85.00°	1.72	2.34	2.34	2.09	1.45	1.61	1.90	1.85	1.54	2.11	1.79	1.72	1.52	2.15	2.46	1.73	1.72
87.50°	1.92	1.62	1.55	1.95	1.54	1.51	1.49	1.45	1.60	1.76	1.75	1.63	1.81	1.20	1.44	1.43	1.92
90.00°	1.10	1.32	1.48	1.42	1.49	0.00	0.00	1.84	0.00	0.00	0.00	0.00	0.00	1.22	1.43	0.48	1.10
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	1780	1780	1780	1780	1738	1738	1738	1738	1661	1661	1661	1590	1590	1590	1525	1525	1495
	1	1690	1646	1607	1571	1653	1614	1578	1546	1553	1525	1498	1497	1475	1454	1446	1428	1399
	2	1600	1523	1459	1405	1567	1497	1438	1389	1448	1400	1358	1403	1363	1329	1361	1329	1303
	3	1514	1412	1333	1270	1483	1391	1318	1260	1351	1290	1240	1314	1263	1220	1280	1238	1214
	4	1433	1314	1226	1160	1405	1296	1215	1153	1263	1194	1139	1233	1173	1125	1205	1154	1132
	5	1357	1226	1134	1066	1332	1211	1125	1061	1184	1109	1052	1159	1093	1042	1135	1078	1059
	6	1286	1147	1053	986	1264	1135	1047	983	1112	1034	976	1091	1022	969	1071	1010	992
	7	1221	1076	983	917	1200	1066	977	914	1047	967	909	1028	957	904	1011	948	932
	8	1160	1013	920	856	1142	1004	916	854	987	907	850	972	899	847	957	892	877
	9	1104	955	864	802	1087	948	860	801	933	854	798	920	847	795	907	841	828
	10	1052	903	813	754	1037	896	811	753	884	805	751	872	800	748	861	794	783

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	49.4 fc	5.6 ft
6.5 ft	35.4 fc	6.6 ft
7.5 ft	26.6 fc	7.6 ft
8.0 ft	23.4 fc	8.1 ft
10.0 ft	14.9 fc	10.2 ft
12.0 ft	10.4 fc	12.2 ft
14.0 ft	7.6 fc	14.2 ft
16.0 ft	5.8 fc	16.3 ft
20.0 ft	3.7 fc	20.3 ft
24.0 ft	2.6 fc	24.4 ft
28.0 ft	1.9 fc	28.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	628451	628451	628451
45.00°	101162	100134	103673
55.00°	50566	51742	52668
65.00°	23517	22350	23998
75.00°	13680	13000	15518
85.00°	8298	11290	7007

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	20.6	21.7	21.0	22.0	22.3	20.0	21.1	20.3	21.4	21.7
	3H	20.9	21.9	21.3	22.2	22.6	20.4	21.3	20.8	21.7	22.0
	4H	21.0	21.9	21.4	22.3	22.7	20.5	21.4	20.9	21.7	22.1
	6H	21.1	21.9	21.5	22.2	22.6	20.5	21.3	21.0	21.7	22.1
	8H	21.1	21.8	21.5	22.2	22.6	20.5	21.3	20.9	21.7	22.1
	12H	21.0	21.8	21.5	22.1	22.6	20.5	21.2	20.9	21.6	22.0
4H	2H	20.6	21.5	21.0	21.8	22.2	20.0	20.9	20.4	21.2	21.6
	3H	21.0	21.8	21.5	22.2	22.6	20.5	21.2	20.9	21.6	22.0
	4H	21.2	21.8	21.6	22.2	22.7	20.7	21.3	21.1	21.7	22.2
	6H	21.3	21.8	21.7	22.3	22.7	20.8	21.3	21.2	21.8	22.2
	8H	21.3	21.8	21.8	22.2	22.7	20.7	21.3	21.2	21.7	22.2
	12H	21.3	21.7	21.8	22.2	22.7	20.7	21.2	21.2	21.7	22.1
8H	4H	21.1	21.6	21.6	22.1	22.6	20.6	21.1	21.1	21.6	22.0
	6H	21.3	21.7	21.8	22.2	22.6	20.7	21.2	21.3	21.7	22.1
	8H	21.3	21.6	21.8	22.2	22.7	20.8	21.1	21.3	21.6	22.1
	12H	21.3	21.6	21.8	22.1	22.7	20.8	21.1	21.3	21.6	22.2
12H	4H	21.1	21.5	21.6	22.0	22.5	20.6	21.0	21.1	21.5	22.0
	6H	21.2	21.6	21.7	22.1	22.6	20.7	21.1	21.2	21.6	22.1
	8H	21.3	21.6	21.8	22.1	22.7	20.7	21.1	21.3	21.6	22.1

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0