

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03RMx xx PC 835 030 DLWFGN MW
Nominal 3" diam round recessed Infinium downlight

Test Number

SP-00761_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	1907
Efficacy	93.48 lm/W

Luminous Dimensions

0° - 180° Size	-0.2
90° - 270° Size	-0.2
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.96
Two luminaires, plane 90°	0.95
Four luminaires	0.88

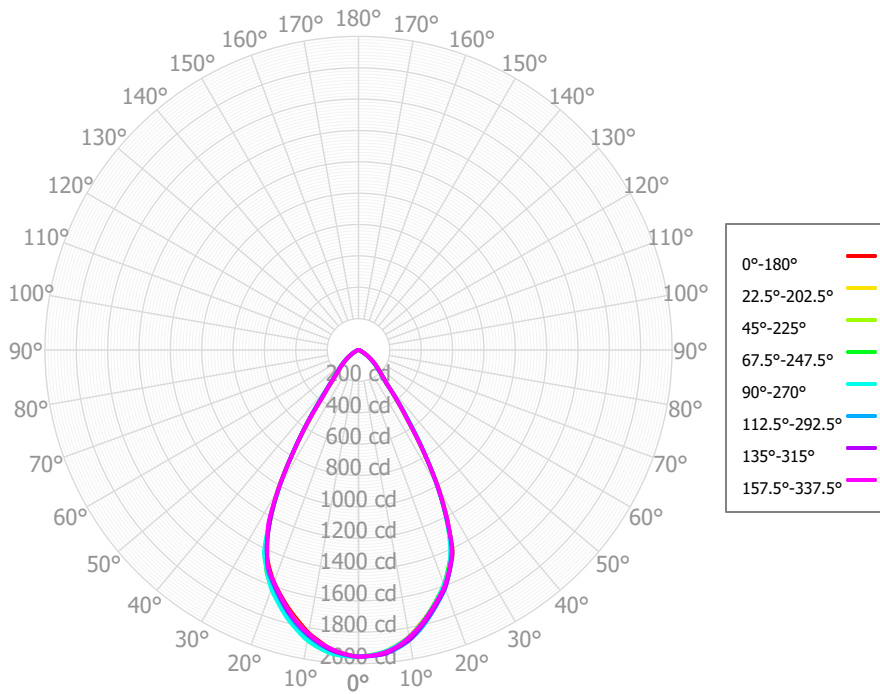
Full Beam Angle

0° - 180°	61°
90° - 270°	61°

IES File Header Contents

Keyword	Value
TEST	SP-00761_1_M-30L
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/8/2019
UPDATE	2/18/2021
LUMCAT	IF03RMx xx PC 835 030 DLWFGN MW
LUMINAIRE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 61 degrees
OTHER	Wide flood optic, Open aperture / no lens
OTHER	Aluminum bezel
LAMPCAT	N/A
LAMP	N/A, CRI: 80, Philips
OTHER	CCT Multipliers: 27K x 0.96, 30K x 0.98, 40K x 1.04
OTHER	Total luminaire wattages is approximate
OTHER	This report prepared by Spectrum Lighting, scaled from 20L
_CRI	80
_CCTMULT	27K x 0.96, 30K x 0.98, 40K x 1.04
_CCTMULTA	27HK x 0.87, 30HK x 0.81
_LAMPMULT	N/A. 30L only

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	184.60	9.68%	90.00° - 100.00°	0.11	0.01%
10.00° - 20.00°	487.11	25.54%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	620.49	32.54%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	363.80	19.08%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	144.69	7.59%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	73.60	3.86%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	24.01	1.26%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	6.45	0.34%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.10	0.11%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1906.85	99.99%	0.00° - 180.00°	1906.97	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°	1956.28	1956.28	1956.28	1956.28	1956.28	1956.28	1956.28	1956.28	1956.28	1956.28	1956.28	1956.28	1956.28	1956.28	1956.28	1956.28	1956.28
2.50°	1949.78	1948.42	1947.57	1947.98	1947.66	1947.07	1943.25	1941.77	1941.81	1941.67	1948.94	1953.73	1954.65	1954.06	1952.80	1951.35	1949.78
5.00°	1936.43	1932.64	1930.93	1932.36	1930.49	1925.36	1924.46	1916.39	1921.80	1920.67	1933.69	1941.38	1945.63	1942.67	1945.38	1936.00	1936.43
7.50°	1899.20	1898.25	1899.89	1901.07	1900.23	1895.18	1886.83	1882.54	1877.75	1885.20	1898.23	1917.30	1916.58	1918.12	1913.11	1906.91	1899.20
10.00°	1857.72	1859.35	1858.71	1861.28	1860.19	1851.51	1844.38	1837.00	1832.45	1841.91	1857.09	1877.33	1881.20	1878.93	1877.05	1861.29	1857.72
12.50°	1798.59	1800.81	1800.17	1802.58	1804.80	1801.36	1789.64	1786.33	1771.52	1783.75	1799.65	1821.52	1826.55	1825.16	1815.66	1805.92	1798.59
15.00°	1737.86	1738.89	1737.37	1735.52	1742.10	1736.59	1729.04	1720.20	1710.27	1722.06	1738.93	1757.85	1767.32	1758.04	1752.05	1740.91	1737.86
17.50°	1672.05	1670.62	1668.53	1664.80	1670.01	1666.35	1656.74	1648.85	1644.07	1655.00	1670.24	1687.82	1696.66	1688.50	1683.28	1673.59	1672.05
20.00°	1601.96	1601.65	1595.73	1592.83	1592.96	1590.91	1582.01	1576.70	1576.15	1583.19	1600.48	1612.08	1624.14	1617.14	1613.93	1604.40	1601.96
22.50°	1521.44	1513.14	1518.39	1499.26	1510.74	1513.96	1503.27	1504.36	1493.52	1505.45	1507.81	1532.61	1526.36	1520.24	1520.51	1513.52	1521.44
25.00°	1408.04	1423.45	1393.47	1400.20	1382.78	1377.28	1385.98	1378.98	1396.03	1387.57	1413.39	1395.45	1426.04	1407.82	1419.87	1408.37	1408.04
27.50°	1231.66	1224.82	1224.20	1213.49	1215.58	1227.91	1217.70	1243.83	1218.22	1228.45	1216.43	1227.18	1222.57	1225.26	1220.73	1230.36	1231.66
30.00°	1026.49	1023.77	1016.95	1010.38	1014.25	1009.69	1017.41	1016.66	1025.91	1023.25	1016.49	1013.68	1014.32	1008.25	1017.51	1013.34	1026.49
32.50°	775.89	777.25	780.16	784.12	788.87	781.80	782.79	778.84	778.42	779.64	782.69	780.94	788.45	786.84	782.26	783.10	775.89
35.00°	560.59	541.39	575.19	555.12	585.17	578.08	574.68	569.25	551.90	570.03	555.21	577.42	566.78	563.72	560.44	547.17	560.59
37.50°	390.25	398.66	390.17	410.45	393.73	376.40	390.30	361.32	387.34	383.68	402.01	383.45	413.75	411.38	406.42	400.37	390.25
40.00°	278.87	270.55	288.00	270.56	287.60	291.20	278.05	281.78	257.98	276.58	263.03	289.11	271.97	280.04	275.10	283.01	278.87
42.50°	228.36	226.90	227.28	223.94	220.32	210.44	218.12	205.33	208.82	213.62	218.86	219.90	224.87	222.55	227.30	227.30	228.36
45.00°	190.01	186.83	188.31	178.97	180.27	178.70	177.48	175.40	168.50	175.56	177.83	184.12	181.18	181.30	184.72	187.32	190.01
47.50°	162.15	161.10	158.16	152.40	150.00	147.50	148.10	146.07	144.10	148.45	151.16	154.21	155.67	153.81	156.85	159.54	162.15
50.00°	135.51	135.21	131.41	126.07	124.86	123.40	122.63	122.58	120.16	123.08	125.32	128.69	130.33	128.42	130.35	133.94	135.51
52.50°	109.72	108.86	105.73	102.12	101.11	99.72	99.03	99.48	96.90	98.31	102.30	103.64	105.62	104.34	106.85	106.94	109.72
55.00°	85.70	84.25	83.16	79.03	80.54	79.05	78.83	78.70	76.77	77.88	80.46	81.25	82.79	80.37	84.33	79.77	85.70
57.50°	62.68	63.72	61.29	61.21	60.60	59.28	59.89	59.11	60.39	58.58	61.63	59.00	65.44	63.44	63.54	63.14	62.68
60.00°	46.08	46.15	45.73	44.45	45.19	43.82	45.47	44.50	45.27	44.26	44.86	45.10	48.90	46.81	46.13	47.12	46.08
62.50°	32.41	34.08	31.19	32.14	30.37	29.93	32.31	31.39	31.41	30.87	32.28	31.42	34.20	33.70	33.55	33.66	32.41
65.00°	22.70	23.49	22.40	21.48	22.86	21.58	23.93	22.92	21.74	23.64	21.77	21.78	22.24	21.14	23.19	20.74	22.70
67.50°	14.39	15.04	14.24	15.63	15.97	14.82	16.51	15.56	15.33	17.16	14.46	13.15	15.00	14.94	15.35	15.83	14.39
70.00°	9.64	9.64	10.22	10.62	12.45	11.19	11.58	10.31	11.27	12.40	10.07	9.89	9.94	9.51	9.88	11.17	9.64
72.50°	5.85	6.78	6.86	6.86	9.24	8.59	7.72	6.97	8.21	8.60	7.99	7.38	6.75	6.68	6.07	7.39	5.85
75.00°	4.59	5.54	5.28	5.26	6.86	6.69	6.32	4.95	6.78	7.13	5.67	5.89	4.51	4.88	5.41	4.90	4.59
77.50°	3.94	4.63	4.40	4.24	5.23	5.39	4.94	4.46	5.49	5.19	3.95	4.31	3.17	3.90	4.68	3.50	3.94
80.00°	3.55	3.83	3.70	2.56	3.88	3.84	3.53	3.98	4.12	3.44	3.03	3.20	2.86	2.84	2.84	3.11	3.55
82.50°	2.35	2.50	2.76	1.53	2.54	2.57	2.17	2.73	2.32	2.34	1.71	2.28	2.11	2.36	2.01	2.70	2.35
85.00°	1.58	1.43	1.95	1.24	1.64	1.65	1.59	1.43	1.73	1.59	2.04	1.41	1.81	1.80	1.69	1.78	1.58
87.50°	1.90	1.35	1.69	1.90	1.68	2.13	1.73	1.28	1.38	1.61	1.78	1.63	1.27	1.51	1.62	1.64	1.90
90.00°	1.74	1.90	1.63	2.18	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	1.68	1.77	1.74
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	2270	2270	2270	2270	2217	2217	2217	2217	2119	2119	2119	2029	2029	2029	1946	1946	1907
	1	2157	2102	2052	2006	2110	2060	2015	1974	1983	1947	1914	1911	1883	1856	1846	1824	1787
	2	2043	1944	1863	1795	2000	1911	1837	1774	1849	1788	1735	1792	1742	1698	1738	1698	1664
	3	1932	1803	1702	1623	1893	1776	1684	1609	1725	1647	1583	1678	1613	1558	1635	1581	1550
	4	1828	1676	1565	1480	1793	1654	1551	1471	1612	1523	1453	1573	1497	1436	1537	1473	1445
	5	1730	1562	1445	1359	1698	1544	1435	1353	1509	1414	1340	1477	1394	1328	1447	1375	1349
	6	1639	1461	1341	1255	1610	1445	1333	1251	1416	1316	1242	1389	1301	1233	1363	1285	1263
	7	1554	1369	1249	1165	1528	1356	1242	1161	1331	1229	1155	1308	1217	1149	1286	1205	1184
	8	1476	1286	1167	1085	1452	1275	1162	1083	1254	1151	1078	1234	1141	1073	1215	1131	1113
	9	1403	1211	1094	1015	1381	1202	1090	1013	1184	1081	1010	1166	1073	1006	1150	1065	1048
	10	1335	1144	1029	952	1316	1135	1025	951	1119	1018	948	1104	1011	945	1090	1004	989

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	64.7 fc	6.5 ft
6.5 ft	46.3 fc	7.6 ft
7.5 ft	34.8 fc	8.8 ft
8.0 ft	30.6 fc	9.4 ft
10.0 ft	19.6 fc	11.8 ft
12.0 ft	13.6 fc	14.1 ft
14.0 ft	10.0 fc	16.5 ft
16.0 ft	7.6 fc	18.8 ft
20.0 ft	4.9 fc	23.5 ft
24.0 ft	3.4 fc	28.2 ft
28.0 ft	2.5 fc	32.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	670271	670271	670271
45.00°	92069	91242	87347
55.00°	51193	49674	48111
65.00°	18401	18163	18537
75.00°	6070	6990	9083
85.00°	6222	7658	6463

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	19.2	20.3	19.6	20.6	20.9	18.9	19.9	19.2	20.2	20.5
	3H	19.3	20.3	19.7	20.6	21.0	19.0	19.9	19.4	20.3	20.6
	4H	19.3	20.1	19.7	20.5	20.9	19.0	19.8	19.4	20.2	20.6
	6H	19.2	20.0	19.6	20.4	20.8	18.9	19.7	19.4	20.1	20.5
	8H	19.2	19.9	19.6	20.3	20.7	18.9	19.7	19.3	20.0	20.5
	12H	19.2	19.9	19.6	20.3	20.7	18.9	19.6	19.3	20.0	20.4
4H	2H	19.2	20.0	19.6	20.4	20.8	18.8	19.7	19.2	20.0	20.4
	3H	19.3	20.0	19.7	20.4	20.8	19.0	19.7	19.4	20.1	20.5
	4H	19.3	19.9	19.7	20.3	20.8	19.0	19.7	19.5	20.1	20.5
	6H	19.3	19.8	19.7	20.2	20.7	19.0	19.6	19.5	20.0	20.5
	8H	19.2	19.7	19.7	20.2	20.7	19.0	19.5	19.5	20.0	20.4
	12H	19.2	19.6	19.7	20.1	20.6	19.0	19.4	19.5	19.9	20.4
8H	4H	19.2	19.7	19.6	20.1	20.6	18.9	19.4	19.4	19.9	20.4
	6H	19.2	19.6	19.7	20.1	20.5	19.0	19.4	19.5	19.9	20.3
	8H	19.2	19.5	19.7	20.0	20.5	18.9	19.3	19.5	19.8	20.3
	12H	19.2	19.5	19.7	20.0	20.5	18.9	19.3	19.5	19.8	20.3
12H	4H	19.1	19.5	19.6	20.0	20.5	18.9	19.3	19.4	19.8	20.3
	6H	19.1	19.5	19.6	19.9	20.5	18.9	19.3	19.4	19.7	20.3
	8H	19.1	19.4	19.6	19.9	20.5	18.9	19.2	19.4	19.7	20.3

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0