

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-00758_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	1977
Efficacy	96.9 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.6
Two luminaires, plane 90°	0.61
Four luminaires	0.64

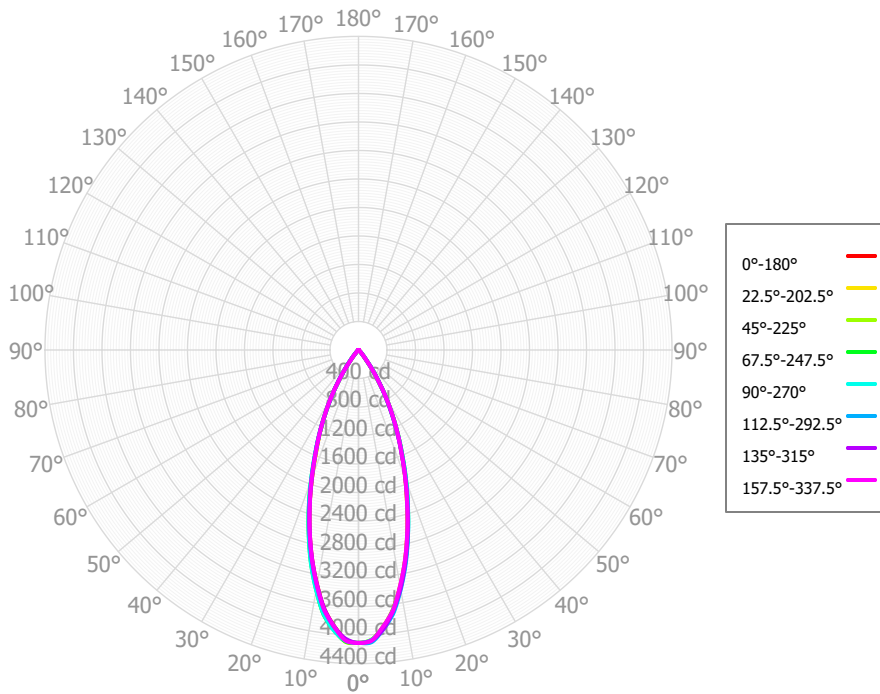
Full Beam Angle

0° - 180°	38°
90° - 270°	39°

IES File Header Contents

Keyword	Value
TEST	SP-00758_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 DLFLGC MW
LUMINAIRE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 38 degrees
OTHER	Flood optic, Clear glass lens
OTHER	Aluminum bezel contains lens
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°	361.38	18.28%	90.00° - 100.00°	0.10	0.01%
10.00° - 20.00°	728.72	36.86%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	589.33	29.81%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	226.92	11.48%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	36.52	1.85%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	14.76	0.75%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	10.46	0.53%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	6.37	0.32%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.19	0.11%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1976.64	99.99%	0.00° - 180.00°	1976.74	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°	4111.29	4111.29	4111.29	4111.29	4111.29	4111.29	4111.29	4111.29	4111.29	4111.29	4111.29	4111.29	4111.29	4111.29	4111.29	4111.29	4111.29
2.50°	4076.48	4097.80	4071.92	4085.79	4075.70	4078.54	4058.81	4084.74	4069.75	4101.71	4073.90	4097.06	4085.48	4106.29	4082.93	4086.88	4076.48
5.00°	3908.93	3904.03	3922.23	3915.12	3921.74	3900.61	3904.29	3898.85	3893.37	3905.51	3928.54	3944.10	3952.17	3940.73	3940.98	3903.36	3908.93
7.50°	3681.71	3699.95	3687.23	3701.28	3691.76	3688.32	3668.61	3680.92	3668.83	3698.16	3702.58	3747.12	3740.98	3732.18	3700.94	3693.10	3681.71
10.00°	3368.64	3364.41	3386.28	3384.10	3391.25	3366.27	3352.16	3356.32	3344.64	3363.80	3385.80	3417.24	3422.36	3413.04	3398.33	3359.59	3368.64
12.50°	3019.58	3025.03	3033.56	3038.05	3045.67	3032.87	3010.72	3013.20	3007.08	3023.84	3043.48	3074.86	3076.73	3064.86	3040.08	3017.95	3019.58
15.00°	2647.43	2644.41	2666.24	2673.48	2682.86	2664.29	2644.93	2644.51	2642.53	2652.48	2673.40	2697.14	2695.70	2684.14	2667.56	2641.85	2647.43
17.50°	2266.16	2267.22	2287.87	2304.10	2309.28	2297.33	2278.96	2271.69	2275.75	2280.04	2298.02	2319.99	2318.29	2295.52	2282.99	2270.93	2266.16
20.00°	1921.96	1924.45	1937.65	1954.47	1956.02	1935.08	1912.82	1922.49	1904.71	1916.73	1917.17	1944.42	1945.40	1939.88	1926.11	1920.69	1921.96
22.50°	1591.49	1588.04	1607.68	1609.78	1614.79	1590.95	1585.94	1576.81	1565.36	1553.64	1580.47	1590.97	1602.81	1591.62	1591.50	1584.86	1591.49
25.00°	1303.66	1307.00	1308.14	1312.84	1309.94	1296.10	1293.65	1292.66	1283.26	1281.20	1287.81	1294.65	1297.15	1296.03	1292.28	1303.67	1303.66
27.50°	1031.20	1028.93	1029.70	1026.95	1025.50	1014.53	1020.36	1016.69	1013.00	1009.84	1014.80	1012.71	1013.85	1011.81	1020.91	1028.10	1031.20
30.00°	778.34	773.62	773.59	775.88	775.05	768.09	763.46	773.14	763.64	768.70	760.69	765.72	756.45	767.48	771.49	772.30	778.34
32.50°	532.08	526.57	532.40	532.41	543.23	539.41	539.45	533.52	533.67	528.02	536.92	537.32	532.55	531.03	538.48	531.82	532.08
35.00°	344.95	339.54	342.17	350.10	359.08	354.91	342.42	350.05	336.11	346.77	340.89	352.88	345.55	352.52	350.53	342.58	344.95
37.50°	176.47	169.35	184.24	180.32	199.67	201.20	202.90	172.79	183.97	167.79	199.40	199.55	203.60	184.43	194.56	182.33	176.47
40.00°	104.53	108.42	99.12	111.72	114.41	119.58	108.20	106.44	104.96	108.02	106.04	115.57	110.21	112.31	105.13	114.33	104.53
42.50°	62.16	54.54	58.41	62.02	65.50	58.36	57.19	50.66	51.80	49.57	54.84	53.89	55.53	56.76	61.91	59.50	62.16
45.00°	42.81	41.79	38.17	44.16	41.87	43.68	39.50	37.63	38.72	37.67	39.54	39.15	40.54	41.06	39.09	43.80	42.81
47.50°	30.03	30.11	29.94	31.86	30.33	31.37	29.28	28.40	28.27	26.03	28.83	27.47	30.00	31.55	29.72	30.71	30.03
50.00°	23.47	24.45	24.30	25.29	23.47	24.15	24.47	23.05	21.70	21.24	21.84	22.08	23.80	24.54	23.53	25.02	23.47
52.50°	18.55	19.36	20.10	19.66	18.73	18.61	20.03	17.98	16.90	16.63	17.30	17.61	19.11	17.87	19.34	20.17	18.55
55.00°	15.67	17.16	16.69	16.58	15.66	16.49	15.84	15.12	14.62	15.58	14.67	14.92	15.86	15.32	16.49	17.57	15.67
57.50°	13.31	14.99	13.72	13.88	13.28	14.76	13.42	12.40	12.90	14.52	13.47	12.97	13.51	13.30	14.45	14.79	13.31
60.00°	12.41	12.91	12.58	12.82	12.82	13.79	12.19	11.34	11.97	13.43	13.33	12.41	11.98	12.38	13.28	11.58	12.41
62.50°	11.86	11.09	12.39	11.98	13.14	12.68	11.57	10.37	10.99	12.30	12.62	11.58	10.83	11.58	12.63	9.47	11.86
65.00°	10.81	10.44	11.04	10.95	11.33	11.30	11.32	9.72	9.94	10.62	11.49	10.26	10.00	10.93	11.58	10.03	10.81
67.50°	9.66	9.64	9.15	9.90	8.71	9.94	10.12	9.06	8.84	9.02	9.91	8.91	9.02	10.30	10.31	9.59	9.66
70.00°	7.67	8.45	7.59	8.97	8.20	8.61	8.50	8.22	7.67	7.82	8.09	7.52	7.94	8.86	8.74	7.36	7.67
72.50°	5.85	7.08	6.15	7.61	8.07	7.08	7.27	7.60	7.02	6.97	7.90	6.78	7.07	7.53	7.09	6.35	5.85
75.00°	5.34	5.52	5.25	4.95	6.94	5.57	6.09	7.34	6.35	6.56	7.41	6.23	6.09	6.57	6.32	6.19	5.34
77.50°	4.83	4.30	4.59	4.44	5.64	4.78	4.94	4.82	5.01	5.15	5.87	5.04	4.75	4.89	5.01	4.75	4.83
80.00°	4.00	3.17	4.05	4.12	4.22	4.03	4.09	3.02	4.10	4.00	4.85	3.99	3.72	3.30	3.18	3.56	4.00
82.50°	2.23	2.21	2.82	2.31	2.99	2.55	3.02	2.41	2.39	2.98	3.06	2.42	2.12	2.65	2.50	2.63	2.23
85.00°	1.94	1.66	1.52	1.52	1.63	1.60	1.48	1.83	1.34	1.92	1.81	1.63	1.47	1.81	1.68	2.09	1.94
87.50°	1.56	1.38	1.33	1.74	1.52	1.47	1.40	1.64	1.30	1.48	1.68	1.33	1.50	1.27	1.69	1.52	1.56
90.00°	1.46	1.41	1.60	0.91	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.83	1.39	1.70	1.46
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	2353	2353	2353	2353	2299	2299	2299	2299	2196	2196	2196	2103	2103	2103	2017	2017	1977
	1	2255	2205	2160	2120	2207	2162	2122	2086	2083	2051	2022	2010	1985	1962	1943	1923	1905
	2	2159	2073	2001	1941	2116	2039	1974	1919	1976	1923	1878	1918	1875	1838	1864	1830	1800
	3	2067	1955	1868	1798	2030	1928	1848	1784	1877	1811	1756	1831	1775	1729	1787	1742	1702
	4	1981	1849	1753	1680	1947	1828	1739	1670	1787	1711	1651	1748	1684	1632	1713	1658	1614
	5	1899	1754	1653	1579	1869	1736	1642	1572	1703	1621	1558	1671	1600	1545	1642	1581	1532
	6	1822	1668	1565	1491	1795	1653	1556	1486	1625	1540	1476	1599	1524	1466	1574	1508	1457
	7	1749	1589	1485	1413	1725	1576	1479	1409	1553	1465	1402	1531	1453	1395	1510	1441	1388
	8	1680	1517	1414	1343	1658	1506	1408	1340	1486	1398	1335	1467	1388	1330	1449	1378	1324
	9	1616	1450	1348	1280	1596	1441	1344	1278	1424	1335	1274	1407	1327	1270	1392	1319	1266
	10	1555	1389	1289	1222	1538	1381	1285	1221	1366	1278	1218	1352	1271	1215	1338	1265	1211

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	135.9 fc	3.8 ft
6.5 ft	97.3 fc	4.5 ft
7.5 ft	73.1 fc	5.2 ft
8.0 ft	64.2 fc	5.6 ft
10.0 ft	41.1 fc	6.9 ft
12.0 ft	28.6 fc	8.3 ft
14.0 ft	21.0 fc	9.7 ft
16.0 ft	16.1 fc	11.1 ft
20.0 ft	10.3 fc	13.9 ft
24.0 ft	7.1 fc	16.7 ft
28.0 ft	5.2 fc	19.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1408633	1408633	1408633
45.00°	20744	18494	20287
55.00°	9362	9970	9352
65.00°	8766	8954	9188
75.00°	7072	6954	9185
85.00°	7638	5962	6420

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	9.1	10.1	9.5	10.4	10.7	8.8	9.7	9.2	10.0	10.4
	3H	10.8	11.6	11.2	12.0	12.3	10.6	11.4	11.0	11.7	12.1
	4H	11.4	12.1	11.8	12.5	12.9	11.4	12.1	11.8	12.5	12.9
	6H	11.9	12.6	12.3	12.9	13.3	12.0	12.6	12.4	13.0	13.4
	8H	12.0	12.7	12.5	13.1	13.5	12.1	12.8	12.6	13.2	13.6
	12H	12.1	12.7	12.6	13.1	13.6	12.2	12.8	12.6	13.2	13.6
4H	2H	9.7	10.5	10.1	10.8	11.2	9.5	10.2	9.9	10.6	11.0
	3H	11.5	12.2	12.0	12.6	13.0	11.4	12.0	11.8	12.4	12.8
	4H	12.2	12.8	12.7	13.2	13.7	12.3	12.8	12.7	13.2	13.7
	6H	12.8	13.3	13.3	13.8	14.2	13.0	13.5	13.5	13.9	14.4
	8H	13.0	13.4	13.5	13.9	14.4	13.2	13.6	13.7	14.1	14.6
	12H	13.2	13.5	13.7	14.0	14.5	13.3	13.7	13.8	14.2	14.6
8H	4H	12.5	12.9	12.9	13.3	13.8	12.6	13.0	13.1	13.5	14.0
	6H	13.2	13.5	13.7	14.0	14.5	13.5	13.8	14.0	14.3	14.8
	8H	13.4	13.7	14.0	14.3	14.8	13.7	14.0	14.3	14.6	15.1
	12H	13.7	14.0	14.2	14.5	15.0	13.9	14.2	14.4	14.7	15.3
12H	4H	12.5	12.8	12.9	13.3	13.8	12.6	13.0	13.1	13.5	13.9
	6H	13.2	13.5	13.8	14.0	14.6	13.5	13.8	14.1	14.3	14.8
	8H	13.5	13.8	14.1	14.3	14.9	13.8	14.1	14.4	14.6	15.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0