

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-00758_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	2074
Efficacy	101.66 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	0.63

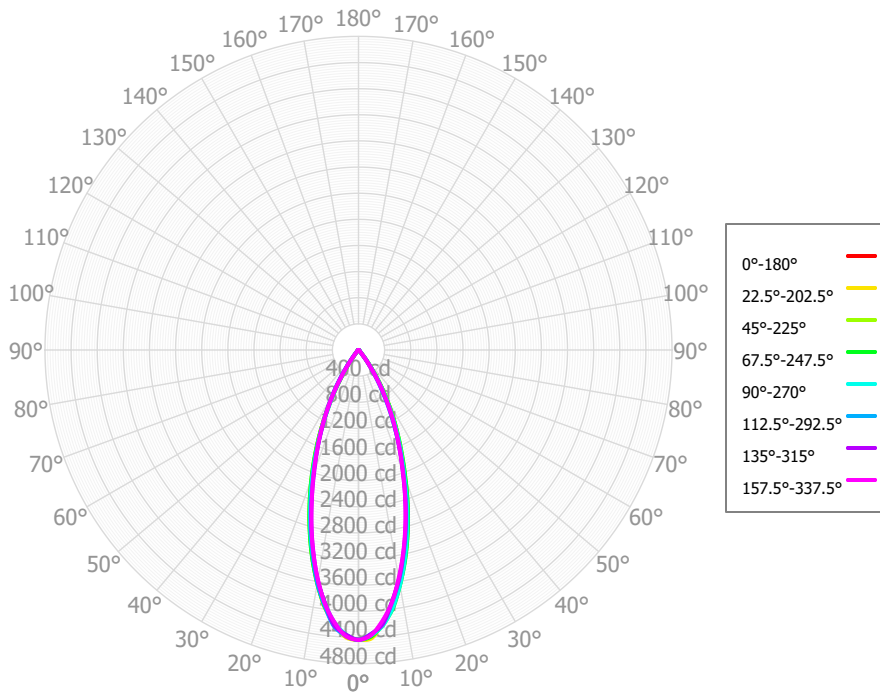
Full Beam Angle

0° - 180°	38°
90° - 270°	38°

IES File Header Contents

Keyword	Value
TEST	SP-00758_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 DLFLGN MW
LUMINAIRE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 38 degrees
OTHER	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°	386.50	18.64%	90.00° - 100.00°	0.11	0.01%
10.00° - 20.00°	775.45	37.39%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	618.45	29.82%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	216.14	10.42%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	29.97	1.45%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	17.89	0.86%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	16.29	0.79%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	10.40	0.50%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.58	0.12%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2073.66	99.99%	0.00° - 180.00°	2073.77	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°	4436.88	4436.88	4436.88	4436.88	4436.88	4436.88	4436.88	4436.88	4436.88	4436.88	4436.88	4436.88	4436.88	4436.88	4436.88	4436.88	4436.88
2.50°	4362.73	4423.74	4374.30	4394.42	4373.02	4379.67	4362.57	4388.84	4370.12	4404.41	4373.58	4387.66	4363.05	4354.94	4355.32	4373.36	4362.73
5.00°	4198.90	4196.59	4237.57	4221.70	4239.85	4253.50	4238.22	4188.22	4211.69	4198.91	4225.49	4193.76	4194.41	4214.35	4220.82	4167.01	4198.90
7.50°	3909.48	3961.73	3971.72	4001.35	3989.32	3955.98	3915.37	3925.91	3920.28	3976.09	3955.39	3962.81	3917.64	3908.69	3897.51	3904.41	3909.48
10.00°	3570.57	3601.52	3650.07	3656.59	3655.91	3630.70	3585.87	3572.57	3592.16	3624.07	3638.68	3624.63	3594.84	3578.87	3566.79	3545.11	3570.57
12.50°	3194.84	3239.06	3284.31	3296.87	3278.02	3232.12	3185.34	3193.43	3215.30	3261.87	3264.72	3270.44	3236.00	3196.08	3177.65	3169.67	3194.84
15.00°	2808.02	2849.52	2903.53	2906.51	2874.84	2828.21	2783.73	2785.29	2823.23	2848.44	2881.21	2882.63	2852.43	2808.69	2785.30	2771.20	2808.02
17.50°	2410.40	2460.05	2502.34	2509.98	2466.06	2413.25	2375.24	2371.24	2414.29	2445.35	2488.02	2491.67	2452.71	2407.53	2375.63	2377.55	2410.40
20.00°	2010.41	2071.11	2095.98	2103.34	2054.74	2020.12	1980.34	2008.66	2039.05	2079.45	2109.03	2110.61	2070.13	2006.93	1981.43	1989.49	2010.41
22.50°	1678.51	1698.43	1747.76	1734.85	1706.85	1664.11	1646.83	1652.97	1694.28	1719.64	1741.75	1730.27	1696.52	1657.92	1646.02	1645.50	1678.51
25.00°	1357.30	1403.96	1410.48	1418.18	1382.04	1340.01	1325.27	1345.57	1364.83	1376.70	1383.69	1372.01	1346.89	1312.20	1321.63	1343.06	1357.30
27.50°	1079.89	1115.23	1127.90	1122.08	1091.99	1059.71	1043.14	1042.03	1046.63	1044.86	1031.88	1018.29	1007.16	1012.20	1028.67	1056.07	1079.89
30.00°	806.52	846.46	851.87	848.68	811.48	796.82	772.28	766.40	755.61	737.38	729.43	734.11	733.23	721.36	753.63	781.27	806.52
32.50°	562.44	591.05	609.83	601.47	578.89	553.31	530.35	493.93	481.19	467.98	454.30	461.67	480.99	501.09	519.62	538.82	562.44
35.00°	320.61	370.90	369.79	377.79	355.70	349.61	320.57	306.29	286.91	264.98	269.30	281.77	300.76	296.84	317.56	317.02	320.61
37.50°	188.82	192.89	221.78	215.72	212.25	183.06	176.57	129.18	131.71	124.14	123.87	124.14	138.15	172.99	173.46	177.21	188.82
40.00°	64.10	104.80	79.63	99.96	79.66	89.57	77.48	85.44	71.08	71.95	67.22	80.05	82.62	71.16	76.53	79.30	64.10
42.50°	44.97	44.84	52.89	46.27	49.57	51.53	51.78	45.93	46.58	40.53	41.33	43.69	45.27	50.18	48.45	42.68	44.97
45.00°	27.55	32.66	28.20	30.26	27.02	33.04	34.51	36.14	34.83	33.51	34.22	36.75	36.05	33.66	31.70	31.58	27.55
47.50°	23.42	23.75	23.83	22.44	23.88	26.52	28.51	27.42	26.94	28.98	32.09	30.61	29.98	29.67	28.74	26.65	23.42
50.00°	19.75	19.34	19.78	18.57	21.07	22.53	24.32	23.70	24.17	26.84	28.40	26.78	26.48	26.56	26.48	23.70	19.75
52.50°	18.54	16.89	17.83	16.83	18.44	19.81	22.11	20.45	22.53	24.51	24.42	23.63	23.13	25.35	24.91	21.60	18.54
55.00°	17.29	16.68	16.12	15.92	15.95	19.08	20.18	18.85	20.34	22.05	21.85	22.01	22.95	23.73	23.06	19.70	17.29
57.50°	15.93	16.39	15.50	15.93	15.06	19.15	18.49	17.47	18.06	19.68	19.46	20.27	22.66	21.36	20.99	18.78	15.93
60.00°	15.11	16.02	14.95	16.21	14.54	18.27	17.88	16.68	17.26	17.38	18.56	18.31	19.96	19.71	20.16	18.03	15.11
62.50°	15.84	15.85	14.64	16.30	16.60	17.10	18.08	16.09	16.60	16.82	17.75	17.38	17.44	19.11	20.17	17.92	15.84
65.00°	16.39	15.84	14.10	16.36	18.05	16.32	16.93	15.91	16.12	17.17	18.24	17.95	16.41	17.85	18.83	17.88	16.39
67.50°	16.55	15.39	12.98	15.57	16.63	15.63	15.00	15.21	15.56	16.00	18.18	17.14	15.36	15.82	16.77	15.72	16.55
70.00°	15.35	14.70	12.32	14.65	15.06	14.52	13.72	13.83	14.39	14.33	15.06	15.09	14.26	13.93	15.02	13.62	15.35
72.50°	12.32	12.95	12.35	13.15	13.14	12.97	12.34	11.08	12.31	11.79	11.31	12.05	12.58	12.12	13.31	12.55	12.32
75.00°	10.45	10.88	11.46	11.55	11.33	10.06	9.01	8.04	9.03	9.19	6.90	8.96	10.33	10.00	9.49	10.28	10.45
77.50°	8.86	8.60	9.87	9.73	9.52	8.71	6.62	6.95	6.29	6.52	5.44	6.41	6.21	7.39	6.60	6.56	8.86
80.00°	6.28	6.17	6.42	7.75	6.46	6.75	4.53	4.46	3.71	4.24	3.54	4.19	3.75	4.23	4.72	5.26	6.28
82.50°	4.02	3.70	3.45	4.84	3.40	3.12	2.22	2.43	1.95	1.82	2.51	2.85	2.27	2.69	2.62	3.44	4.02
85.00°	1.75	1.93	2.25	2.27	1.93	1.95	1.39	1.96	1.33	1.61	2.16	1.74	1.60	1.65	1.45	2.20	1.75
87.50°	1.39	1.54	2.05	1.91	1.85	1.91	1.91	1.81	1.48	1.08	1.82	1.52	1.69	1.65	1.91	1.83	1.39
90.00°	1.33	1.74	2.04	1.84	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35	1.50	1.55	1.33
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	2469	2469	2469	2469	2411	2411	2411	2411	2304	2304	2304	2206	2206	2206	2116	2116	2074
	1	2365	2312	2265	2222	2315	2268	2226	2187	2184	2151	2120	2108	2081	2057	2037	2017	1977
	2	2264	2173	2098	2035	2220	2138	2070	2012	2072	2017	1969	2011	1966	1927	1955	1919	1887
	3	2169	2050	1959	1886	2129	2022	1939	1871	1969	1899	1842	1920	1862	1813	1875	1827	1786
	4	2078	1941	1840	1763	2043	1918	1825	1753	1875	1795	1732	1835	1767	1713	1798	1741	1693
	5	1993	1842	1737	1659	1962	1823	1725	1651	1788	1702	1637	1755	1681	1623	1724	1660	1609
	6	1913	1753	1645	1567	1885	1737	1636	1562	1708	1618	1552	1680	1602	1542	1654	1586	1532
	7	1838	1671	1563	1487	1813	1658	1556	1483	1633	1542	1476	1610	1529	1468	1588	1516	1461
	8	1767	1596	1489	1415	1744	1585	1483	1412	1564	1472	1406	1544	1461	1401	1526	1451	1395
	9	1700	1527	1421	1349	1680	1518	1417	1347	1500	1408	1343	1483	1399	1339	1467	1391	1335
	10	1638	1464	1359	1290	1619	1455	1356	1288	1440	1348	1285	1425	1341	1282	1411	1334	1279

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	146.7 fc	3.8 ft
6.5 ft	105.0 fc	4.4 ft
7.5 ft	78.9 fc	5.1 ft
8.0 ft	69.3 fc	5.5 ft
10.0 ft	44.4 fc	6.8 ft
12.0 ft	30.8 fc	8.2 ft
14.0 ft	22.6 fc	9.6 ft
16.0 ft	17.3 fc	10.9 ft
20.0 ft	11.1 fc	13.7 ft
24.0 ft	7.7 fc	16.4 ft
28.0 ft	5.7 fc	19.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1520189	1520189	1520189
45.00°	13347	13664	13094
55.00°	10329	9628	9528
65.00°	13287	11431	14633
75.00°	13828	15166	14999
85.00°	6895	8836	7588

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	10.2	11.2	10.6	11.5	11.8	11.1	12.0	11.4	12.3	12.6
	3H	13.3	14.1	13.6	14.4	14.8	13.6	14.4	14.0	14.8	15.2
	4H	14.2	15.0	14.6	15.3	15.7	14.5	15.3	14.9	15.6	16.0
	6H	14.9	15.6	15.3	16.0	16.4	15.0	15.7	15.4	16.1	16.5
	8H	15.0	15.7	15.5	16.1	16.5	15.1	15.7	15.5	16.1	16.5
	12H	15.1	15.7	15.5	16.1	16.5	15.1	15.7	15.5	16.1	16.5
4H	2H	11.2	11.9	11.6	12.3	12.7	11.9	12.6	12.3	13.0	13.4
	3H	14.2	14.8	14.6	15.3	15.7	14.5	15.2	15.0	15.6	16.0
	4H	15.3	15.8	15.7	16.3	16.7	15.5	16.0	15.9	16.4	16.9
	6H	16.0	16.5	16.5	16.9	17.4	16.0	16.5	16.5	17.0	17.4
	8H	16.2	16.6	16.7	17.1	17.6	16.1	16.6	16.6	17.0	17.5
	12H	16.3	16.6	16.7	17.1	17.6	16.2	16.5	16.7	17.0	17.5
8H	4H	15.6	16.1	16.1	16.5	17.0	15.6	16.0	16.1	16.5	17.0
	6H	16.4	16.8	16.9	17.3	17.8	16.3	16.6	16.8	17.1	17.6
	8H	16.7	17.0	17.2	17.5	18.0	16.4	16.7	17.0	17.3	17.8
	12H	16.8	17.0	17.3	17.5	18.1	16.5	16.8	17.0	17.3	17.9
12H	4H	15.6	16.0	16.1	16.5	17.0	15.6	16.0	16.1	16.4	16.9
	6H	16.4	16.8	17.0	17.2	17.8	16.3	16.6	16.8	17.0	17.6
	8H	16.7	17.0	17.2	17.5	18.1	16.4	16.7	17.0	17.2	17.8

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0