

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03RMx xx PC 835 030 DLNFGP MW

Test Number

SP-00759_2_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	2020
Efficacy	99.04 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.47
Two luminaires, plane 90°	0.48
Four luminaires	0.49

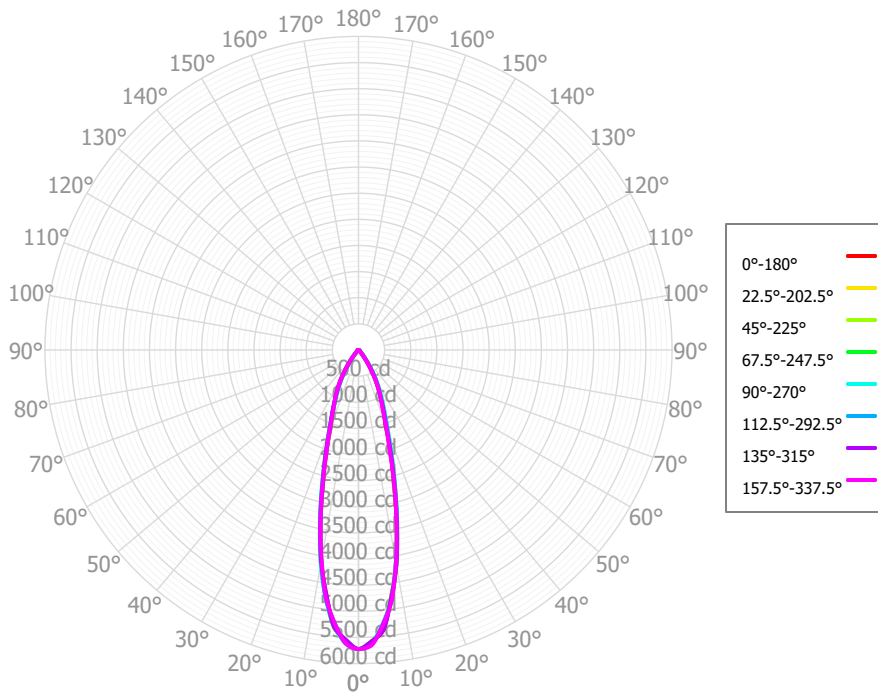
Full Beam Angle

0° - 180°	28°
90° - 270°	29°

IES File Header Contents

Keyword	Value
TEST	SP-00759_2_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 DLNFGP MW
LUMINIARE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 28 degrees
OTHER	Narrow flood optic, Solite 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°	472.00	23.36%	90.00° - 100.00°	0.12	0.01%
10.00° - 20.00°	730.02	36.13%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	483.25	23.92%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	221.63	10.97%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	52.32	2.59%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	27.08	1.34%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	19.78	0.98%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	11.38	0.56%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.75	0.14%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	2020.20	99.99%	0.00° - 180.00°	2020.32	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°	5722.95	5722.95	5722.95	5722.95	5722.95	5722.95	5722.95	5722.95	5722.95	5722.95	5722.95	5722.95	5722.95	5722.95	5722.95	5722.95	5722.95
2.50°	5589.75	5618.06	5586.02	5591.64	5609.49	5624.46	5551.51	5622.81	5560.69	5604.31	5581.62	5581.29	5617.14	5644.27	5587.43	5659.18	5589.75
5.00°	5392.27	5289.98	5333.43	5341.37	5309.94	5250.59	5327.10	5244.49	5323.76	5276.47	5313.26	5338.31	5308.42	5272.58	5391.68	5293.62	5392.27
7.50°	4780.24	4799.46	4773.22	4786.71	4803.40	4801.80	4723.82	4782.20	4726.35	4779.13	4760.89	4774.82	4802.30	4837.73	4791.19	4850.25	4780.24
10.00°	4162.04	4130.66	4126.72	4171.00	4131.93	4089.92	4112.93	4071.55	4112.42	4088.46	4142.07	4135.98	4158.12	4125.89	4175.05	4127.90	4162.04
12.50°	3366.74	3358.99	3382.56	3406.94	3420.61	3380.56	3363.70	3359.02	3348.14	3375.13	3379.93	3400.73	3398.54	3374.84	3387.99	3355.76	3366.74
15.00°	2587.47	2664.24	2616.36	2697.03	2681.37	2678.49	2631.62	2641.85	2611.17	2638.99	2674.56	2647.74	2708.55	2682.11	2624.99	2646.78	2587.47
17.50°	2026.11	2007.53	2067.13	2100.65	2105.23	2061.26	2087.44	2021.14	2050.85	2050.50	2073.84	2094.70	2069.04	1995.09	2046.61	1946.42	2026.11
20.00°	1495.87	1580.64	1555.95	1610.36	1627.86	1650.21	1577.31	1606.40	1541.60	1591.14	1590.06	1569.98	1614.97	1605.16	1515.54	1555.32	1495.87
22.50°	1245.82	1252.05	1275.01	1310.38	1308.83	1302.30	1320.36	1269.73	1290.20	1274.08	1291.80	1294.67	1278.94	1233.43	1252.11	1193.00	1245.82
25.00°	1003.93	1021.33	1024.83	1054.16	1073.49	1086.81	1075.31	1075.59	1057.33	1066.63	1045.33	1043.74	1034.81	1027.92	1002.86	994.80	1003.93
27.50°	814.35	825.83	835.81	866.58	874.43	884.01	897.70	888.42	898.46	883.22	870.97	857.65	841.03	826.55	817.51	805.93	814.35
30.00°	626.90	635.65	652.31	683.93	691.74	703.98	719.16	712.38	732.96	715.85	696.03	675.53	659.58	646.01	635.54	623.52	626.90
32.50°	449.84	447.10	480.12	507.96	521.74	530.98	536.56	538.96	545.47	543.01	520.36	507.73	483.99	467.35	465.75	441.96	449.84
35.00°	287.83	305.80	308.54	354.85	356.66	369.00	366.38	369.15	372.68	366.98	366.61	341.04	342.70	329.78	311.61	303.71	287.83
37.50°	185.59	176.20	210.60	229.04	243.62	239.45	241.22	234.76	240.35	241.39	236.18	236.16	215.25	197.91	204.03	169.62	185.59
40.00°	101.14	115.98	114.88	141.06	147.44	153.93	136.24	142.78	133.64	141.10	146.10	134.20	142.44	132.97	116.96	118.77	101.14
42.50°	74.27	69.31	84.37	92.37	100.55	95.21	91.41	83.28	87.33	89.91	93.38	96.56	88.11	73.46	81.87	70.91	74.27
45.00°	52.48	52.53	54.98	62.40	66.72	68.51	56.17	58.05	53.19	59.66	61.59	60.99	64.12	58.02	55.12	56.33	52.48
47.50°	44.62	40.31	47.11	49.34	51.85	51.09	44.87	42.62	43.45	45.03	46.89	49.86	48.75	44.00	46.26	42.74	44.62
50.00°	37.64	36.57	39.44	39.84	41.10	43.32	35.83	36.20	35.62	36.10	37.91	39.56	40.56	38.37	39.02	36.73	37.64
52.50°	32.69	33.74	34.12	33.17	36.51	36.71	31.68	30.98	31.06	31.25	32.98	35.95	34.02	33.11	34.80	31.34	32.69
55.00°	28.85	28.55	29.22	30.15	32.96	31.13	28.26	26.73	27.17	27.64	29.17	32.33	30.92	29.62	31.23	29.42	28.85
57.50°	27.23	23.19	27.50	29.64	29.09	28.26	26.22	24.35	24.30	25.29	26.05	28.65	28.46	26.04	28.69	27.42	27.23
60.00°	25.17	23.71	25.45	27.19	25.17	27.55	23.73	23.28	23.04	23.26	23.31	25.07	26.59	22.14	25.38	25.00	25.17
62.50°	22.34	24.41	21.51	23.56	24.22	26.16	20.51	21.72	23.88	21.12	20.76	21.94	24.79	18.90	21.00	22.49	22.34
65.00°	19.30	20.17	18.24	21.28	23.53	24.32	18.80	19.87	22.20	18.97	19.37	18.56	20.93	17.65	17.73	19.66	19.30
67.50°	15.94	16.08	17.96	19.69	20.53	21.80	18.99	17.04	17.94	16.33	18.45	14.45	17.09	16.16	15.81	16.72	15.94
70.00°	13.95	14.26	17.16	17.88	17.41	18.97	17.68	13.80	15.20	13.98	14.94	13.09	14.30	14.11	13.41	13.50	13.95
72.50°	13.40	12.50	14.94	16.00	13.73	16.21	15.47	13.58	13.21	13.37	11.70	14.50	11.66	11.77	10.60	10.90	13.40
75.00°	10.64	10.92	11.90	13.21	11.00	13.09	11.39	11.78	11.80	11.54	9.94	12.59	9.26	9.13	9.43	9.05	10.64
77.50°	7.24	8.35	8.06	10.12	10.79	9.31	8.68	7.13	9.36	8.75	7.72	8.94	7.89	6.88	8.18	6.65	7.24
80.00°	4.86	5.42	4.79	6.52	8.06	6.64	6.70	6.65	6.46	5.58	5.09	4.96	4.49	4.79	4.94	4.39	4.86
82.50°	3.24	3.52	2.74	3.40	4.45	3.69	3.66	3.89	4.00	2.83	2.53	2.89	1.93	2.84	2.51	2.63	3.24
85.00°	2.01	2.44	1.96	2.31	1.75	1.75	1.53	2.05	2.16	1.79	3.00	1.71	1.92	1.14	1.56	1.84	2.01
87.50°	1.93	1.50	1.98	2.53	2.06	1.46	1.82	1.49	2.24	2.13	1.76	2.24	0.00	1.77	1.47	1.63	1.93
90.00°	1.58	1.11	1.46	2.79	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72	1.61	2.00	1.58
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	2405	2405	2405	2405	2349	2349	2349	2349	2245	2245	2245	2149	2149	2149	2061	2061	2020
	1	2305	2254	2208	2167	2256	2210	2170	2132	2129	2097	2067	2054	2029	2006	1986	1966	1927
	2	2207	2120	2047	1986	2164	2085	2019	1964	2021	1967	1921	1962	1918	1880	1907	1872	1836
	3	2116	2002	1913	1843	2077	1974	1893	1828	1923	1855	1799	1875	1819	1771	1830	1784	1751
	4	2030	1897	1800	1726	1995	1875	1785	1716	1833	1756	1696	1794	1729	1676	1758	1703	1672
	5	1949	1804	1702	1627	1919	1785	1691	1620	1751	1669	1606	1719	1648	1592	1689	1628	1599
	6	1874	1719	1616	1542	1846	1704	1607	1537	1676	1590	1527	1649	1574	1517	1624	1558	1532
	7	1803	1643	1540	1467	1779	1631	1533	1463	1607	1519	1456	1584	1507	1449	1563	1494	1470
	8	1737	1574	1471	1401	1715	1563	1466	1398	1543	1455	1392	1524	1445	1387	1506	1435	1412
	9	1675	1510	1409	1341	1655	1501	1405	1339	1484	1396	1335	1467	1388	1330	1452	1380	1359
	10	1617	1452	1353	1287	1599	1444	1349	1285	1429	1342	1282	1415	1335	1279	1401	1328	1310

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	189.2 fc	2.8 ft
6.5 ft	135.5 fc	3.3 ft
7.5 ft	101.7 fc	3.8 ft
8.0 ft	89.4 fc	4.1 ft
10.0 ft	57.2 fc	5.1 ft
12.0 ft	39.7 fc	6.1 ft
14.0 ft	29.2 fc	7.1 ft
16.0 ft	22.4 fc	8.1 ft
20.0 ft	14.3 fc	10.2 ft
24.0 ft	9.9 fc	12.2 ft
28.0 ft	7.3 fc	14.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1960830	1960830	1960830
45.00°	25429	26642	32331
55.00°	17234	17454	19691
65.00°	15647	14784	19073
75.00°	14085	15759	14560
85.00°	7914	7708	6893

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	13.0	14.0	13.4	14.3	14.6	13.7	14.7	14.1	15.0	15.3
	3H	14.6	15.5	15.0	15.8	16.2	15.4	16.3	15.8	16.6	17.0
	4H	15.3	16.1	15.7	16.4	16.8	16.0	16.8	16.5	17.2	17.6
	6H	15.6	16.3	16.0	16.7	17.1	16.5	17.2	16.9	17.6	18.0
	8H	15.7	16.3	16.1	16.7	17.1	16.6	17.2	17.0	17.6	18.0
	12H	15.7	16.3	16.1	16.7	17.1	16.6	17.2	17.0	17.6	18.0
4H	2H	13.5	14.2	13.9	14.6	15.0	14.1	14.9	14.5	15.2	15.6
	3H	15.3	15.9	15.7	16.3	16.7	16.1	16.7	16.5	17.1	17.6
	4H	16.1	16.6	16.5	17.1	17.5	16.9	17.5	17.4	17.9	18.4
	6H	16.5	17.0	17.0	17.4	17.9	17.4	17.9	17.9	18.4	18.9
	8H	16.6	17.0	17.0	17.5	17.9	17.5	18.0	18.0	18.4	18.9
	12H	16.6	17.0	17.1	17.5	18.0	17.5	17.9	18.0	18.4	18.9
8H	4H	16.3	16.8	16.8	17.2	17.7	17.1	17.5	17.6	18.0	18.5
	6H	16.8	17.2	17.3	17.7	18.2	17.7	18.1	18.2	18.6	19.1
	8H	16.9	17.2	17.5	17.8	18.3	17.8	18.1	18.4	18.7	19.2
	12H	17.0	17.3	17.6	17.8	18.4	17.9	18.2	18.4	18.7	19.2
12H	4H	16.3	16.7	16.8	17.2	17.7	17.1	17.5	17.6	18.0	18.4
	6H	16.8	17.1	17.3	17.6	18.1	17.7	18.0	18.2	18.5	19.0
	8H	17.0	17.2	17.5	17.7	18.3	17.9	18.1	18.4	18.6	19.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0