

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

CF04XXUDPC 20LXWCL 20LXWNL 35KXX XXMW (IND/DIR Damp location)
Nom. 4" Diam. Gamma Indirect/Direct Cylinder

Test Number

SP-01093

Test Date

1/20/2020

The results contained in this report pertain only to this IES file.

Summary of Results

Power

Input Watts	25.8 W
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Lumen Output

Output Lumens	3073
Efficacy	119.1 lm/W

Luminous Dimensions

0° - 180° Size	-0.33
90° - 270° Size	-0.33
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.99
Two luminaires, plane 90°	0.99
Four luminaires	0.9

Full Beam Angle

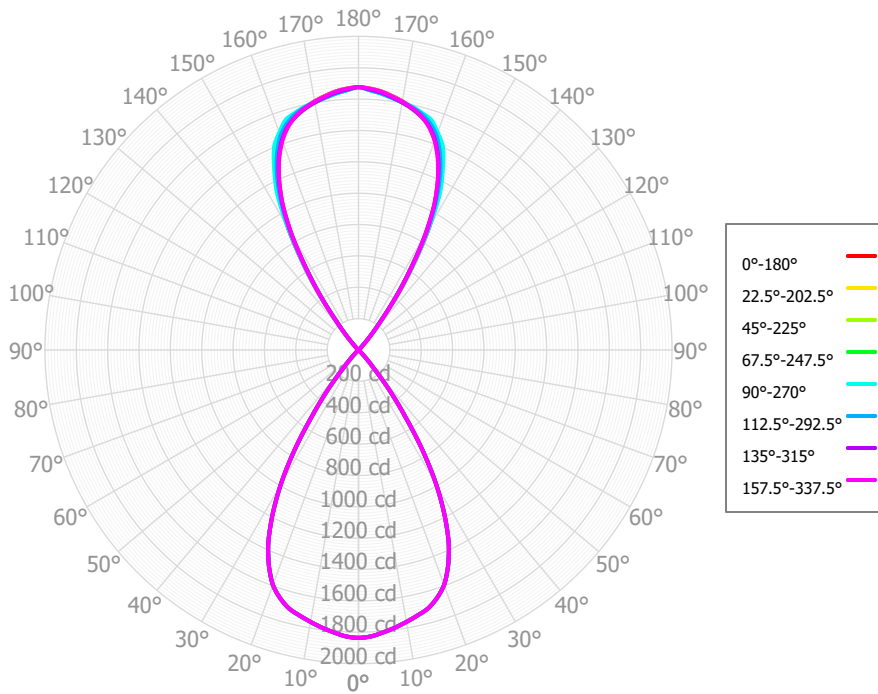
0° - 180°	301°
90° - 270°	300°

IES File Header Contents

Keyword	Value
TEST	SP-01093
TESTLAB	VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	1/20/2020
ISSUEDATE	12/16/2020
LUMCAT	CF04XXUDPC 20LXWCL 20LXWNL 35KXX XXMW (IND/DIR Damp location)
LUMINAIRE	Nom. 4" Diam. Gamma Indirect/Direct Cylinder
OTHER	Uplight: Xtra Wide Optic, Flush Clear Glass lens
OTHER	Uplight: 61.1 Degree Beam Angle
OTHER	Downlight: Xtra Wide Optic, No lens
OTHER	Downlight: 61.9 Degree Beam Angle
OTHER	Trim: Matte White
LAMP	N/A
LAMPCAT	N/A, 19mm LES Uplight
OTHER	N/A, 19mm LES Downlight
OTHER	Total Luminaire Watts is approximate
OTHER	CCT Output Multipliers: 27K x 0.97, 30K x 0.98, 40K x 1.04, 27HK x 0.89, 30HK x 0.83
OTHER	See Catalog cut sheet for different source lumen multipliers
OTHER	This report prepared by Spectrum Lighting
_CRI	80
CCTMULT	27K x 0.97, 30K x 0.98, 40K x 1.04

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 XXMW (IND/DIR Damp location)

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	179.70	5.85%	90.00° - 100.00°	1.48	0.05%
10.00° - 20.00°	477.79	15.55%	100.00° - 110.00°	1.92	0.06%
20.00° - 30.00°	608.01	19.79%	100.00° - 120.00°	4.12	0.13%
30.00° - 40.00°	331.26	10.78%	120.00° - 130.00°	3.36	0.11%
40.00° - 50.00°	31.17	1.01%	130.00° - 140.00°	25.25	0.82%
50.00° - 60.00°	1.51	0.05%	140.00° - 150.00°	272.78	8.88%
60.00° - 70.00°	1.58	0.05%	150.00° - 160.00°	545.51	17.75%
70.00° - 80.00°	1.59	0.05%	160.00° - 170.00°	433.96	14.12%
80.00° - 90.00°	1.41	0.05%	170.00° - 180.00°	163.81	5.33%
0.00° - 90.00°	1634.03	53.18%	0.00° - 180.00°	3084.30	100.38%

Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	1836.51	1836.51	1836.51	1836.51	1836.51
2.50°	1828.74	1828.74	1828.74	1828.74	1828.74
5.00°	1808.51	1808.51	1808.51	1808.51	1808.51
7.50°	1786.24	1786.24	1786.24	1786.24	1786.24
10.00°	1761.30	1761.30	1761.30	1761.30	1761.30
12.50°	1735.28	1735.28	1735.28	1735.28	1735.28
15.00°	1708.08	1708.08	1708.08	1708.08	1708.08
17.50°	1660.76	1660.76	1660.76	1660.76	1660.76
20.00°	1595.94	1595.94	1595.94	1595.94	1595.94
22.50°	1492.83	1492.83	1492.83	1492.83	1492.83
25.00°	1362.43	1362.43	1362.43	1362.43	1362.43
27.50°	1190.10	1190.10	1190.10	1190.10	1190.10
30.00°	993.65	993.65	993.65	993.65	993.65
32.50°	765.80	765.80	765.80	765.80	765.80
35.00°	523.55	523.55	523.55	523.55	523.55
37.50°	328.40	328.40	328.40	328.40	328.40
40.00°	150.24	150.24	150.24	150.24	150.24
42.50°	70.56	70.56	70.56	70.56	70.56
45.00°	17.69	17.69	17.69	17.69	17.69
47.50°	5.96	5.96	5.96	5.96	5.96
50.00°	2.25	2.25	2.25	2.25	2.25
52.50°	1.70	1.70	1.70	1.70	1.70
55.00°	1.55	1.55	1.55	1.55	1.55
57.50°	1.59	1.59	1.59	1.59	1.59
60.00°	1.64	1.64	1.64	1.64	1.64
62.50°	1.65	1.65	1.65	1.65	1.65
65.00°	1.65	1.65	1.65	1.65	1.65
67.50°	1.54	1.54	1.54	1.54	1.54
70.00°	1.47	1.47	1.47	1.47	1.47
72.50°	1.57	1.57	1.57	1.57	1.57
75.00°	1.55	1.55	1.55	1.55	1.55
77.50°	1.42	1.42	1.42	1.42	1.42
80.00°	1.48	1.48	1.48	1.48	1.48
82.50°	1.42	1.42	1.42	1.42	1.42
85.00°	1.31	1.31	1.31	1.31	1.31
87.50°	1.28	1.28	1.28	1.28	1.28
90.00°	0.86	0.86	0.86	0.86	0.86
92.50°	1.35	1.57	1.59	1.59	1.11
95.00°	1.31	1.44	1.63	1.15	1.23
97.50°	1.56	1.47	1.38	1.20	1.43
100.00°	1.46	1.43	1.60	1.53	1.16
102.50°	1.39	1.70	1.85	1.82	2.00
105.00°	1.61	2.26	1.51	2.05	1.64
107.50°	1.60	2.20	1.58	2.37	1.50
110.00°	1.95	2.14	1.64	2.29	1.63
112.50°	2.66	2.07	1.69	2.00	1.74

CF04XXUDPC 20LXWCL 20LXWNL 35KXX
 XXMW (IND/DIR Damp location)

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	3326	3326	3326	3326	3080	3080	3080	3080	2621	2621	2621	2201	2201	2201	1815	1815	1634
	1	3114	3013	2922	2840	2889	2805	2728	2659	2415	2362	2315	2057	2023	1991	1727	1706	1549
	2	2915	2741	2598	2477	2709	2563	2441	2338	2229	2143	2069	1921	1863	1812	1636	1600	1462
	3	2729	2504	2331	2192	2541	2351	2202	2082	2062	1955	1866	1795	1721	1659	1548	1499	1379
	4	2557	2297	2107	1961	2385	2164	1999	1872	1913	1792	1696	1680	1594	1525	1463	1406	1301
	5	2398	2115	1916	1770	2242	1999	1825	1696	1779	1649	1550	1575	1481	1408	1384	1320	1227
	6	2253	1954	1753	1609	2110	1852	1675	1547	1659	1524	1424	1478	1379	1304	1309	1240	1158
	7	2120	1811	1612	1472	1989	1721	1545	1419	1550	1414	1315	1390	1288	1212	1239	1167	1094
	8	1998	1685	1488	1353	1878	1605	1430	1308	1452	1316	1219	1309	1206	1130	1174	1099	1035
	9	1887	1573	1380	1250	1777	1501	1329	1211	1364	1229	1134	1235	1132	1057	1114	1037	980
	10	1785	1472	1285	1160	1684	1408	1239	1126	1284	1150	1058	1168	1064	991	1058	981	929

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	60.7 fc	0.0 ft
6.5 ft	43.5 fc	0.0 ft
7.5 ft	32.6 fc	0.0 ft
8.0 ft	28.7 fc	0.0 ft
10.0 ft	18.4 fc	0.0 ft
12.0 ft	12.8 fc	0.0 ft
14.0 ft	9.4 fc	0.0 ft
16.0 ft	7.2 fc	0.0 ft
20.0 ft	4.6 fc	0.0 ft
24.0 ft	3.2 fc	0.0 ft
28.0 ft	2.3 fc	0.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	231124	231124	231124
45.00°	3149	3149	3149
55.00°	340	340	340
65.00°	492	492	492
75.00°	753	753	753
85.00°	1890	1890	1890

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	-13.1	-12.5	-12.1	-11.5	-10.3	-13.1	-12.5	-12.1	-11.5	-10.3
	3H	-9.8	-9.2	-8.8	-8.3	-7.0	-9.8	-9.2	-8.8	-8.3	-7.0
	4H	-7.9	-7.4	-6.9	-6.4	-5.1	-7.9	-7.4	-6.9	-6.4	-5.1
	6H	-6.0	-5.5	-5.0	-4.6	-3.3	-6.0	-5.5	-5.0	-4.6	-3.3
	8H	-5.0	-4.5	-4.0	-3.5	-2.2	-5.0	-4.5	-4.0	-3.5	-2.2
	12H	-3.9	-3.4	-2.9	-2.5	-1.2	-3.9	-3.4	-2.9	-2.5	-1.2
4H	2H	-12.0	-11.5	-11.0	-10.5	-9.2	-12.0	-11.5	-11.0	-10.5	-9.2
	3H	-8.6	-8.1	-7.6	-7.1	-5.8	-8.6	-8.1	-7.6	-7.1	-5.8
	4H	-6.5	-6.1	-5.5	-5.1	-3.8	-6.5	-6.1	-5.5	-5.1	-3.8
	6H	-4.5	-4.1	-3.5	-3.1	-1.8	-4.5	-4.1	-3.5	-3.1	-1.8
	8H	-3.4	-3.0	-2.3	-2.0	-0.7	-3.4	-3.0	-2.3	-2.0	-0.7
	12H	-2.2	-1.9	-1.1	-0.8	0.5	-2.2	-1.9	-1.1	-0.8	0.5
8H	4H	-5.8	-5.5	-4.8	-4.5	-3.2	-5.8	-5.5	-4.8	-4.5	-3.2
	6H	-3.5	-3.2	-2.4	-2.2	-0.9	-3.5	-3.2	-2.4	-2.2	-0.9
	8H	-2.2	-1.9	-1.1	-0.9	0.4	-2.2	-1.9	-1.1	-0.9	0.4
	12H	-0.8	-0.6	0.3	0.5	1.8	-0.8	-0.6	0.3	0.5	1.8
12H	4H	-5.6	-5.3	-4.6	-4.3	-3.0	-5.6	-5.3	-4.6	-4.3	-3.0
	6H	-3.2	-3.0	-2.1	-1.9	-0.6	-3.2	-3.0	-2.1	-1.9	-0.6
	8H	-1.8	-1.6	-0.7	-0.5	0.9	-1.8	-1.6	-0.7	-0.5	0.9

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0