

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

CK0407PC 10L 35K WD xx SO xx MW
Nom. 4.5" Diam x 7"H Round Cylinder, Wide Beam

Test Number

SP-01444

Test Date

11/23/2022

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

Summary of Results

Power

Input Watts	6.7 W
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Lumen Output

Output Lumens	729
Efficacy	108.84 lm/W

Luminous Dimensions

0° - 180° Size	-0.38
90° - 270° Size	-0.38
Height	0

Spacing Criterion

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

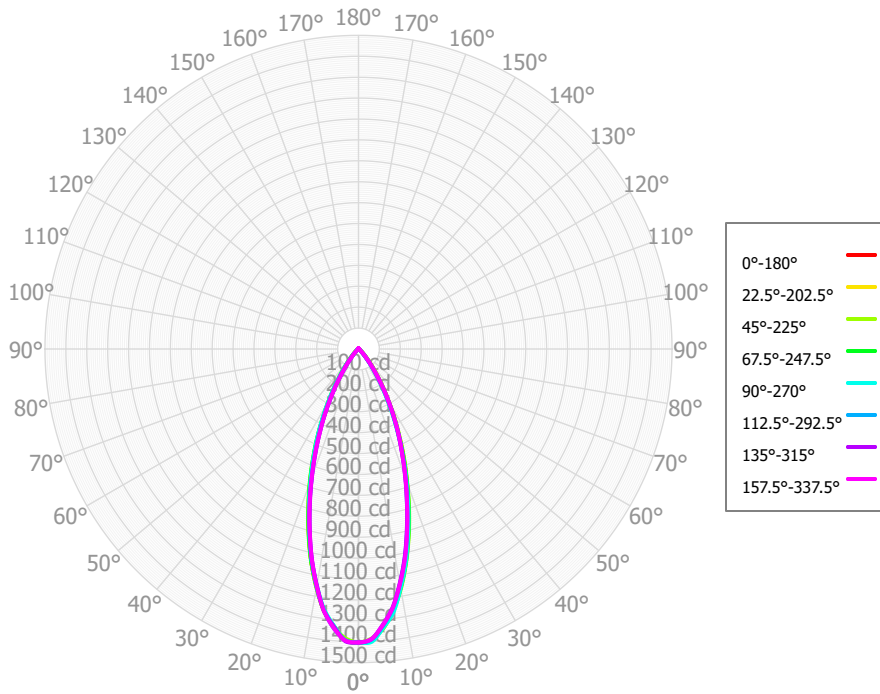
Full Beam Angle

0° - 180°	39°
90° - 270°	39°

IES File Header Contents

Keyword	Value
TEST	SP-01444
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/23/2022
ISSUEDATE	11/23/2022
LUMCAT	CK0407PC 10L 35K WD xx SO xx MW
LUMINAIRE	Nom. 4.5" Diam x 7"H Round Cylinder, Wide Beam
OTHER	Solite lens, Matte White finish
OTHER	39 Degree Beam Angle
OTHER	Reference Project SL378
LAMP	N/A
LAMPCAT	N/A, Min. 80 CRI
OTHER	Total Luminaire Watts is approximate
OTHER	CCT Multipliers: 27K x 0.95, 30K x 0.97, 40K x 1.03
OTHER	This report prepared by Spectrum Lighting

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	123.25	16.90%	90.00° - 100.00°	1.75	0.24%
10.00° - 20.00°	249.64	34.23%	100.00° - 110.00°	1.66	0.23%
20.00° - 30.00°	206.59	28.33%	100.00° - 120.00°	3.25	0.45%
30.00° - 40.00°	93.91	12.88%	120.00° - 130.00°	1.49	0.20%
40.00° - 50.00°	25.46	3.49%	130.00° - 140.00°	1.24	0.17%
50.00° - 60.00°	8.79	1.21%	140.00° - 150.00°	1.04	0.14%
60.00° - 70.00°	5.57	0.76%	150.00° - 160.00°	0.79	0.11%
70.00° - 80.00°	3.74	0.51%	160.00° - 170.00°	0.50	0.07%
80.00° - 90.00°	2.05	0.28%	170.00° - 180.00°	0.17	0.02%
0.00° - 90.00°	719.00	98.60%	0.00° - 180.00°	729.22	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°	1404.18	1404.18	1404.18	1404.18	1404.18	1404.18	1404.18	1404.18	1404.18	1404.18	1404.18	1404.18	1404.18	1404.18	1404.18	1404.18	1404.18
2.50°	1391.83	1395.45	1387.86	1396.31	1403.40	1395.41	1400.51	1397.28	1395.63	1397.15	1386.84	1396.55	1397.46	1392.15	1390.74	1390.15	1391.83
5.00°	1331.65	1335.73	1344.23	1339.54	1340.92	1342.70	1335.91	1343.27	1335.83	1335.29	1338.26	1333.77	1332.02	1330.87	1325.87	1327.21	1331.65
7.50°	1254.33	1261.48	1263.29	1266.20	1273.44	1264.00	1264.61	1264.93	1264.10	1265.94	1260.82	1261.95	1257.78	1252.30	1248.17	1250.96	1254.33
10.00°	1149.83	1156.13	1166.16	1160.80	1160.77	1155.50	1148.34	1152.16	1154.81	1155.79	1160.01	1153.70	1148.97	1141.12	1138.13	1141.38	1149.83
12.50°	1034.23	1042.17	1049.56	1046.89	1044.99	1034.70	1030.52	1030.95	1041.56	1043.77	1043.97	1043.10	1035.07	1023.60	1021.25	1027.65	1034.23
15.00°	907.07	916.41	928.11	922.33	917.03	904.33	900.77	901.85	912.50	918.93	922.19	917.67	909.24	896.98	893.54	899.29	907.07
17.50°	785.29	794.44	804.13	799.13	791.18	778.14	772.87	776.57	784.80	795.10	797.98	793.89	787.40	770.40	770.71	771.95	785.29
20.00°	667.20	675.99	679.88	677.07	670.13	654.04	651.59	653.67	667.43	675.79	682.16	678.63	671.48	659.85	653.10	657.22	667.20
22.50°	559.93	566.59	571.66	563.05	555.02	544.48	536.85	541.73	552.74	561.02	568.37	566.48	563.31	551.48	548.62	546.76	559.93
25.00°	457.54	462.71	465.10	453.47	448.75	439.29	436.12	434.11	448.01	457.52	464.85	463.27	462.93	456.52	453.38	454.31	457.54
27.50°	369.03	370.90	372.96	359.96	352.70	347.60	342.59	342.57	349.88	359.97	362.56	366.56	370.19	364.73	365.88	365.04	369.03
30.00°	284.14	283.84	285.52	271.88	266.62	258.01	259.08	254.55	266.04	271.96	280.49	281.31	282.49	282.77	281.86	283.61	284.14
32.50°	216.49	218.36	216.93	204.26	196.20	191.17	188.18	188.40	193.30	199.39	201.69	208.34	211.57	208.01	210.65	210.88	216.49
35.00°	150.85	157.58	155.98	140.43	136.12	126.85	128.85	124.79	136.42	143.08	149.80	149.52	147.63	147.24	142.92	151.65	150.85
37.50°	111.10	115.96	112.62	102.18	94.48	88.36	86.74	87.98	92.74	100.55	102.73	104.56	103.50	98.41	100.54	104.64	111.10
40.00°	73.22	76.30	77.26	66.28	60.53	53.60	55.27	53.50	61.46	67.57	74.45	70.43	64.27	64.58	61.30	70.10	73.22
42.50°	51.04	54.72	53.58	47.53	41.63	37.33	36.49	36.74	41.26	46.23	50.34	48.24	44.54	41.27	42.75	46.65	51.04
45.00°	31.44	34.70	35.97	30.23	26.29	23.79	22.60	22.34	27.88	30.19	35.65	32.10	26.87	26.93	25.37	30.87	31.44
47.50°	22.71	25.70	24.37	21.40	19.85	17.59	16.43	16.31	19.97	21.95	24.16	23.35	19.65	18.66	18.42	21.42	22.71
50.00°	15.83	17.90	17.08	14.15	14.37	12.91	11.90	11.63	14.24	15.79	17.26	16.84	13.01	13.78	12.37	14.76	15.83
52.50°	13.33	14.17	12.60	11.65	11.12	10.85	9.47	9.78	10.78	12.45	12.76	12.57	11.33	11.15	10.12	11.50	13.33
55.00°	10.82	10.95	9.93	9.41	8.15	9.22	7.27	8.21	7.83	9.46	10.57	8.65	9.85	9.28	8.29	9.14	10.82
57.50°	8.28	8.79	8.04	7.67	7.37	8.06	6.82	7.06	6.97	8.27	9.03	8.36	9.18	8.20	7.54	7.80	8.28
60.00°	6.94	7.28	7.17	6.33	6.48	7.04	6.39	6.02	6.29	7.13	7.90	8.09	8.19	7.27	6.98	6.58	6.94
62.50°	6.83	6.63	6.56	5.48	5.22	6.10	6.04	5.09	5.83	6.36	7.14	6.38	6.48	6.42	6.70	6.15	6.83
65.00°	6.67	5.89	5.95	5.17	4.33	4.92	5.62	4.54	5.33	5.61	6.53	5.01	5.29	5.60	6.05	5.72	6.67
67.50°	6.48	5.07	5.34	5.30	4.25	3.60	4.94	4.22	4.56	4.98	5.83	5.23	4.87	5.18	5.02	5.36	6.48
70.00°	5.98	4.69	4.83	4.61	4.14	3.39	4.23	3.80	3.85	4.42	5.11	5.21	4.51	4.79	4.32	4.99	5.98
72.50°	5.34	4.57	4.32	3.48	3.97	3.50	3.48	3.34	3.40	4.04	4.63	4.49	4.22	4.56	3.84	4.56	5.34
75.00°	4.25	3.98	3.75	2.75	3.64	3.30	2.90	2.83	2.99	3.63	4.15	3.68	3.67	4.26	3.31	4.08	4.25
77.50°	3.03	3.21	3.23	2.15	3.16	3.04	2.54	2.32	2.66	3.20	3.38	2.72	2.95	3.76	2.76	3.50	3.03
80.00°	2.47	2.83	2.91	1.91	2.56	2.45	2.16	2.17	2.31	2.61	2.64	2.16	2.60	3.11	2.44	2.91	2.47
82.50°	1.98	2.53	2.48	1.72	1.89	1.87	1.77	2.05	1.96	1.87	2.28	2.06	2.41	2.19	2.18	2.33	1.98
85.00°	1.86	1.98	1.82	1.62	1.79	1.48	1.64	1.97	1.69	1.47	1.93	2.00	1.92	1.62	1.86	1.90	1.86
87.50°	1.74	1.43	1.53	1.53	1.93	1.20	1.67	1.89	1.50	1.29	1.63	1.95	1.37	1.48	1.52	1.63	1.74
90.00°	1.62	1.43	1.77	1.42	1.66	1.50	1.68	1.83	1.46	1.34	1.46	1.79	1.37	1.49	1.55	1.78	1.62
92.50°	1.55	1.45	1.87	1.37	1.30	1.70	1.67	1.76	1.52	1.49	1.59	1.57	1.43	1.62	1.59	2.20	1.55
95.00°	1.62	1.53	1.84	1.67	1.35	1.64	1.69	1.67	1.56	1.67	1.63	1.48	1.50	1.52	1.75	2.03	1.62
97.50°	1.64	1.53	1.69	1.84	1.44	1.57	1.70	1.53	1.60	1.85	1.55	1.43	1.55	1.30	1.91	1.60	1.64
100.00°	1.57	1.30	1.46	1.62	1.70	1.48	1.70	1.29	1.46	1.73	1.59	1.38	1.42	1.40	2.06	1.66	1.57

CK0407PC 10L 35K WD xx SO xx MW

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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	866	866	866	866	844	844	844	844	805	805	805	768	768	768	735	735	719
	1	827	807	790	774	808	791	775	761	759	747	736	731	721	712	704	697	682
	2	789	756	728	705	772	742	717	696	717	697	679	694	678	663	673	660	646
	3	754	710	676	649	739	699	668	643	679	653	632	660	639	621	643	625	612
	4	720	669	632	603	706	660	626	599	643	614	591	628	603	583	614	593	581
	5	688	632	593	564	676	625	588	561	611	580	555	598	571	550	586	563	552
	6	659	599	559	530	648	593	555	528	581	548	524	570	542	520	560	535	526
	7	631	569	529	501	621	564	526	499	554	520	496	545	515	493	536	510	501
	8	605	541	502	474	596	537	499	473	529	495	471	521	490	468	513	486	478
	9	580	516	477	451	572	513	475	450	505	471	448	498	468	446	492	464	457
	10	557	493	455	429	550	490	453	429	484	450	427	478	447	425	472	444	437

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	46.4 fc	3.8 ft
6.5 ft	33.2 fc	4.5 ft
7.5 ft	25.0 fc	5.2 ft
8.0 ft	21.9 fc	5.6 ft
10.0 ft	14.0 fc	7.0 ft
12.0 ft	9.8 fc	8.4 ft
14.0 ft	7.2 fc	9.8 ft
16.0 ft	5.5 fc	11.2 ft
20.0 ft	3.5 fc	14.0 ft
24.0 ft	2.4 fc	16.8 ft
28.0 ft	1.8 fc	19.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	133271	133271	133271
45.00°	4220	4828	3528
55.00°	1790	1643	1349
65.00°	1498	1335	972
75.00°	1557	1374	1336
85.00°	2024	1981	1954

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	4.1	5.1	4.5	5.4	5.7	4.1	5.0	4.5	5.4	5.7
	3H	6.1	7.0	6.6	7.4	7.8	5.4	6.3	5.8	6.6	7.0
	4H	7.1	7.9	7.5	8.2	8.7	6.2	7.0	6.7	7.4	7.8
	6H	7.7	8.4	8.1	8.8	9.2	6.9	7.7	7.4	8.1	8.5
	8H	7.9	8.6	8.4	9.0	9.4	7.3	7.9	7.7	8.4	8.8
	12H	8.2	8.8	8.6	9.2	9.7	7.6	8.3	8.1	8.7	9.1
4H	2H	4.6	5.4	5.0	5.7	6.2	4.6	5.4	5.0	5.7	6.2
	3H	6.8	7.4	7.3	7.9	8.3	6.2	6.9	6.7	7.3	7.7
	4H	7.9	8.5	8.4	8.9	9.4	7.2	7.7	7.6	8.2	8.7
	6H	8.7	9.1	9.2	9.6	10.1	8.0	8.5	8.5	8.9	9.5
	8H	9.0	9.4	9.5	9.9	10.4	8.4	8.8	8.9	9.3	9.8
	12H	9.4	9.8	9.9	10.3	10.8	8.8	9.2	9.3	9.7	10.2
8H	4H	8.1	8.6	8.6	9.1	9.6	7.4	7.9	7.9	8.4	8.9
	6H	9.1	9.5	9.7	10.0	10.5	8.4	8.8	9.0	9.3	9.8
	8H	9.6	9.9	10.2	10.5	11.0	8.9	9.3	9.5	9.8	10.3
	12H	10.2	10.5	10.8	11.0	11.6	9.6	9.9	10.1	10.4	11.0
12H	4H	8.1	8.5	8.7	9.0	9.6	7.5	7.9	8.0	8.4	8.9
	6H	9.2	9.5	9.8	10.0	10.6	8.5	8.8	9.1	9.3	9.9
	8H	9.8	10.1	10.4	10.6	11.2	9.1	9.4	9.7	9.9	10.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0