

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-01440

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	719
Efficacy	107.28 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.5
Two luminaires, plane 90°	0.5
Four luminaires	0.53

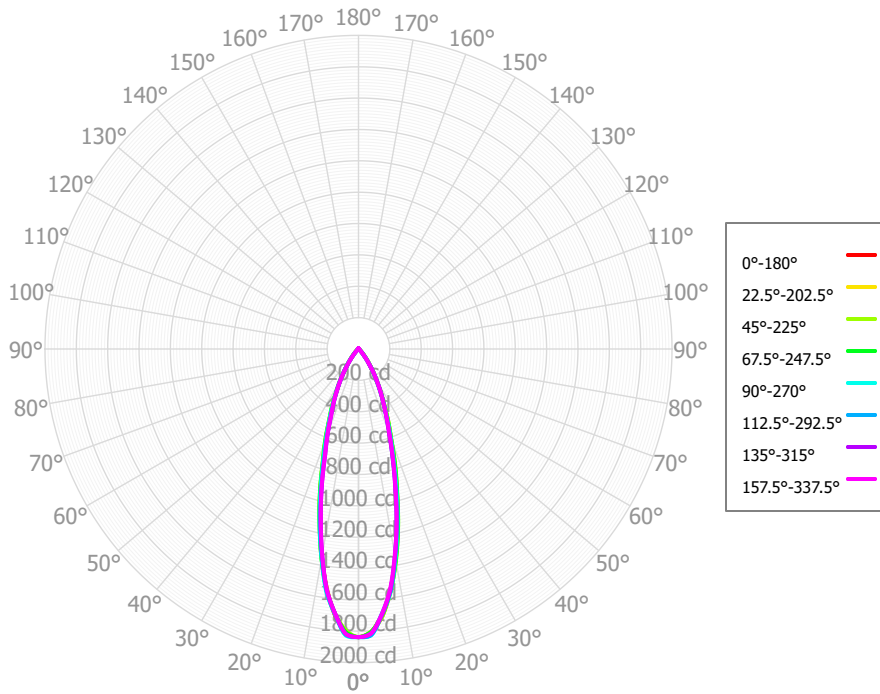
Full Beam Angle

0° - 180°	30°
90° - 270°	30°

IES File Header Contents

Keyword	Value
TEST	SP-01440
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/23/2022
ISSUEDATE	11/23/2022
LUMCAT	CK0407PC 10L 35K MD xx SO xx MW
LUMINAIRE	Nom. 4.5" Diam x 7"H Round Cylinder, Medium Beam
OTHER	Solite lens, Matte White finish
OTHER	30 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°	152.96	21.28%	90.00° - 100.00°	1.91	0.27%
10.00° - 20.00°	254.70	35.44%	100.00° - 110.00°	1.90	0.26%
20.00° - 30.00°	175.26	24.38%	100.00° - 120.00°	3.68	0.51%
30.00° - 40.00°	80.70	11.23%	120.00° - 130.00°	1.65	0.23%
40.00° - 50.00°	22.84	3.18%	130.00° - 140.00°	1.44	0.20%
50.00° - 60.00°	8.83	1.23%	140.00° - 150.00°	1.18	0.16%
60.00° - 70.00°	5.91	0.82%	150.00° - 160.00°	0.86	0.12%
70.00° - 80.00°	3.92	0.55%	160.00° - 170.00°	0.54	0.08%
80.00° - 90.00°	2.19	0.30%	170.00° - 180.00°	0.19	0.03%
0.00° - 90.00°	707.32	98.41%	0.00° - 180.00°	718.77	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°	1837.88	1837.88	1837.88	1837.88	1837.88	1837.88	1837.88	1837.88	1837.88	1837.88	1837.88	1837.88	1837.88	1837.88	1837.88	1837.88	1837.88
2.50°	1809.84	1808.45	1806.22	1807.88	1827.01	1823.92	1820.43	1820.81	1811.18	1811.75	1798.96	1809.43	1830.14	1828.32	1817.22	1817.23	1809.84
5.00°	1715.74	1706.10	1717.49	1706.95	1703.65	1700.46	1697.91	1697.54	1708.54	1702.34	1698.73	1700.07	1702.62	1698.02	1704.83	1699.35	1715.74
7.50°	1551.75	1554.65	1562.72	1562.07	1563.77	1557.05	1551.64	1550.44	1543.56	1551.45	1547.91	1557.41	1566.46	1558.02	1554.10	1545.53	1551.75
10.00°	1358.18	1361.41	1373.95	1368.79	1357.73	1344.82	1335.31	1333.46	1345.41	1353.11	1357.54	1357.90	1355.36	1341.51	1341.64	1333.80	1358.18
12.50°	1144.13	1156.75	1166.84	1164.38	1149.67	1131.04	1113.09	1110.72	1125.17	1140.01	1145.18	1146.51	1144.82	1125.85	1124.72	1120.52	1144.13
15.00°	924.93	945.56	953.81	951.66	936.83	914.08	904.35	906.59	926.01	943.96	950.79	949.39	936.46	914.22	903.10	905.62	924.93
17.50°	751.02	769.34	778.81	771.01	748.28	727.01	704.87	710.89	735.73	750.55	762.52	754.87	747.63	722.24	722.19	727.35	751.02
20.00°	582.37	605.42	610.01	605.75	596.25	579.33	573.63	577.20	596.54	614.29	621.64	615.76	603.74	581.32	569.59	575.35	582.37
22.50°	475.61	488.68	493.75	484.41	471.24	462.02	453.68	454.98	469.57	483.03	489.62	482.69	480.17	461.31	461.30	463.65	475.61
25.00°	372.22	380.71	381.69	375.54	372.95	371.90	373.89	372.79	380.95	390.91	395.24	390.07	386.32	376.27	373.28	370.41	372.22
27.50°	298.41	304.17	304.33	297.87	292.69	296.49	298.13	296.01	296.60	302.95	304.22	303.11	305.44	300.08	300.06	297.20	298.41
30.00°	228.62	230.55	230.96	224.63	224.51	229.68	230.93	230.80	233.55	235.39	236.76	234.76	237.03	233.60	230.79	229.33	228.62
32.50°	174.37	177.09	178.07	173.57	169.81	173.51	170.40	171.93	172.30	173.72	172.80	173.82	178.81	174.96	173.55	172.55	174.37
35.00°	125.47	126.48	129.94	124.44	120.82	121.25	118.97	121.71	126.76	128.35	129.44	127.96	127.21	122.00	117.87	117.19	125.47
37.50°	89.00	93.54	95.40	91.56	85.31	84.71	80.25	82.83	85.29	90.23	90.59	90.14	90.09	83.85	83.04	84.12	89.00
40.00°	59.74	63.83	66.21	61.15	53.05	51.37	53.33	54.16	59.45	64.54	65.38	62.84	58.91	52.77	50.24	52.75	59.74
42.50°	41.07	44.23	46.42	42.15	37.46	36.33	35.22	35.24	38.47	44.71	44.53	43.14	40.47	35.91	35.08	36.20	41.07
45.00°	27.73	28.65	31.50	26.50	23.72	22.84	22.46	22.23	28.33	31.42	31.73	30.09	25.10	23.05	21.63	21.83	27.73
47.50°	19.56	20.71	22.18	19.39	18.34	17.32	16.34	15.97	20.07	21.96	22.24	21.61	18.56	16.92	15.47	16.89	19.56
50.00°	14.41	15.17	15.71	14.08	13.28	12.35	12.74	12.27	14.56	15.41	16.80	15.78	12.96	11.67	10.77	12.70	14.41
52.50°	11.24	12.67	11.48	11.72	11.10	10.99	10.21	10.51	10.87	11.89	12.48	12.59	11.25	10.73	9.58	10.33	11.24
55.00°	9.83	10.51	9.69	9.60	9.29	9.57	7.91	9.18	8.93	9.85	9.06	10.34	9.67	9.83	8.62	8.69	9.83
57.50°	9.16	8.62	9.13	7.74	8.94	7.93	7.51	8.18	7.89	8.42	7.79	8.70	9.20	8.55	7.99	8.20	9.16
60.00°	8.45	7.14	7.77	6.95	8.18	6.65	7.25	7.21	7.41	7.18	7.66	7.18	8.54	7.36	7.24	7.60	8.45
62.50°	7.75	5.87	6.16	6.92	6.52	6.06	6.64	6.38	6.24	6.45	6.87	6.62	7.19	6.61	6.37	6.88	7.75
65.00°	6.75	5.65	5.76	6.21	5.33	5.53	6.05	5.57	4.79	5.80	5.88	6.11	6.22	5.98	5.62	6.19	6.75
67.50°	5.73	5.78	5.55	5.19	4.84	5.06	5.57	4.91	4.36	5.34	5.40	5.22	6.06	5.65	4.95	5.52	5.73
70.00°	5.13	4.97	4.91	4.38	4.47	4.60	4.99	4.30	4.18	4.90	5.02	4.38	5.57	5.11	4.83	4.77	5.13
72.50°	4.52	3.99	4.26	3.62	4.21	4.15	4.05	3.88	4.06	4.64	4.56	3.91	4.60	4.24	4.95	3.98	4.52
75.00°	3.80	3.36	3.84	3.22	3.58	3.68	3.34	3.44	3.95	4.36	4.07	3.42	3.94	3.65	4.28	3.64	3.80
77.50°	3.12	2.75	3.41	2.87	2.70	3.19	3.07	2.96	3.34	3.94	3.09	2.92	3.59	3.34	3.41	3.42	3.12
80.00°	2.54	2.29	2.88	2.58	2.27	2.60	2.60	2.46	2.75	3.38	2.21	2.56	3.09	2.77	2.64	2.91	2.54
82.50°	2.11	1.91	2.40	2.29	2.01	1.97	1.86	1.93	2.26	2.47	1.88	2.48	2.49	2.01	1.88	2.37	2.11
85.00°	2.01	1.99	2.07	2.02	1.92	1.70	1.70	1.48	1.85	1.90	1.63	2.31	2.15	1.75	1.80	2.18	2.01
87.50°	1.94	2.05	1.79	1.78	1.88	1.50	2.04	1.10	1.72	1.92	1.63	2.02	1.91	1.71	1.72	1.99	1.94
90.00°	1.92	2.03	1.58	1.64	1.97	1.55	2.04	1.12	1.62	1.87	1.70	1.78	1.86	1.72	1.54	1.81	1.92
92.50°	1.95	2.00	1.51	1.53	2.08	1.61	1.84	1.36	1.61	1.76	1.90	1.58	1.86	1.75	1.47	1.68	1.95
95.00°	2.02	1.95	1.61	1.48	1.94	1.61	1.73	1.58	1.67	1.94	1.87	1.40	1.97	1.69	1.82	1.73	2.02
97.50°	1.96	1.97	1.64	1.51	1.82	1.60	1.66	1.79	1.83	2.33	1.58	1.23	2.09	1.62	2.05	1.78	1.96
100.00°	1.81	2.07	1.62	1.67	1.91	1.56	1.69	1.86	1.87	2.05	1.68	1.40	1.85	1.64	1.99	1.80	1.81

CK0407PC 10L 35K MD 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	853	853	853	853	832	832	832	832	792	792	792	756	756	756	723	723	707
	1	816	797	780	765	797	781	766	752	750	738	727	721	712	703	695	688	673
	2	780	748	722	699	764	735	711	691	710	691	674	687	672	658	666	654	640
	3	747	705	673	647	732	694	665	641	674	650	630	656	636	619	639	622	610
	4	715	667	631	604	702	658	626	600	642	614	592	626	603	584	612	593	581
	5	686	633	596	568	674	626	591	565	612	582	559	599	574	554	587	565	555
	6	658	602	564	537	648	596	561	535	585	554	530	574	547	526	564	540	531
	7	632	574	536	510	623	569	533	508	559	528	505	550	522	501	542	517	508
	8	608	549	511	485	600	544	509	484	536	504	482	528	500	479	521	496	487
	9	586	525	489	464	578	522	487	463	515	483	461	508	479	459	502	476	468
	10	565	504	468	444	557	501	466	443	495	463	442	489	460	440	483	457	450

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	60.8 fc	3.0 ft
6.5 ft	43.5 fc	3.5 ft
7.5 ft	32.7 fc	4.0 ft
8.0 ft	28.7 fc	4.3 ft
10.0 ft	18.4 fc	5.4 ft
12.0 ft	12.8 fc	6.5 ft
14.0 ft	9.4 fc	7.5 ft
16.0 ft	7.2 fc	8.6 ft
20.0 ft	4.6 fc	10.8 ft
24.0 ft	3.2 fc	12.9 ft
28.0 ft	2.3 fc	15.1 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	174433	174433	174433
45.00°	3722	4228	3184
55.00°	1627	1603	1537
65.00°	1516	1294	1196
75.00°	1394	1410	1313
85.00°	2185	2257	2095

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	4.4	5.3	4.8	5.7	6.0	4.3	5.2	4.7	5.6	5.9
	3H	6.2	7.0	6.6	7.4	7.8	5.9	6.8	6.3	7.1	7.5
	4H	6.9	7.7	7.3	8.0	8.5	6.7	7.5	7.1	7.8	8.3
	6H	7.5	8.2	7.9	8.6	9.0	7.4	8.1	7.8	8.5	8.9
	8H	7.8	8.4	8.2	8.9	9.3	7.7	8.4	8.2	8.8	9.2
	12H	8.1	8.8	8.6	9.2	9.6	8.1	8.7	8.5	9.1	9.6
4H	2H	4.7	5.5	5.2	5.9	6.3	4.7	5.5	5.2	5.9	6.3
	3H	6.8	7.4	7.2	7.9	8.3	6.6	7.3	7.1	7.7	8.1
	4H	7.6	8.2	8.1	8.7	9.2	7.5	8.1	8.0	8.5	9.0
	6H	8.4	8.9	8.9	9.4	9.9	8.4	8.8	8.9	9.3	9.8
	8H	8.8	9.2	9.3	9.7	10.2	8.8	9.2	9.3	9.7	10.2
	12H	9.3	9.7	9.8	10.2	10.7	9.3	9.7	9.8	10.2	10.7
8H	4H	8.0	8.4	8.5	8.9	9.4	7.8	8.3	8.3	8.7	9.3
	6H	9.0	9.3	9.5	9.8	10.4	8.8	9.2	9.4	9.7	10.2
	8H	9.4	9.8	10.0	10.3	10.8	9.4	9.7	9.9	10.2	10.8
	12H	10.1	10.4	10.7	10.9	11.5	10.1	10.4	10.6	10.9	11.5
12H	4H	8.0	8.4	8.5	8.9	9.4	7.8	8.2	8.4	8.8	9.3
	6H	9.1	9.4	9.6	9.9	10.5	8.9	9.2	9.5	9.7	10.3
	8H	9.6	9.9	10.2	10.4	11.0	9.5	9.8	10.1	10.3	11.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0