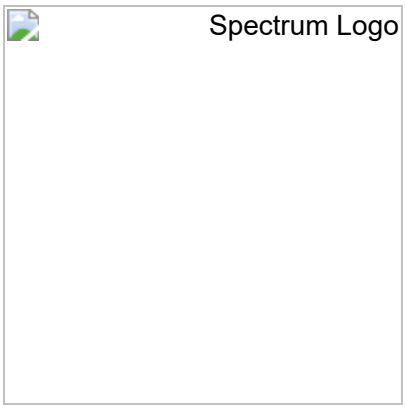


Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

CW0606TA-05L-AMB-EX-GL-MW

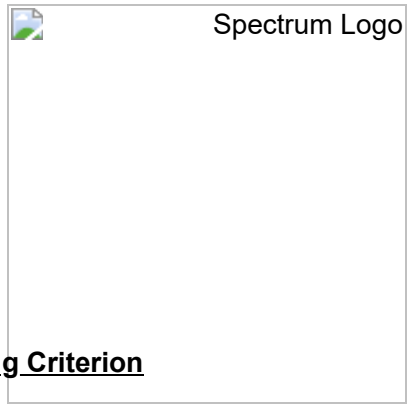
Nom 6" diam cylinder luminaire

Test Number

SP-00813

Test Date

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



Summary of Results

Power

Input Watts	15.3 W

Lumen Output

Output Lumens	305
Efficacy	19.94 lm/W

Luminous Dimensions

0° - 180° Size	-0.5
90° - 270° Size	-0.5
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.27
Two luminaires, plane 90°	1.27
Four luminaires	1.25

Full Beam Angle

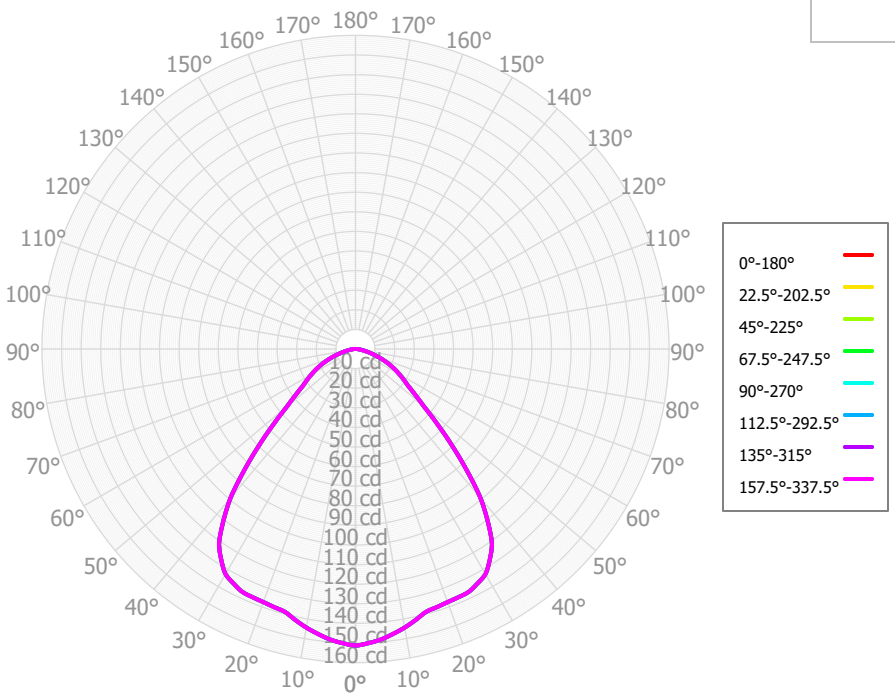
0° - 180°	88°
90° - 270°	88°

IES File Header Contents

Keyword	Value
TEST	SP-00813
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	3/28/2019
UPDATE	4/23/2019
LUMCAT	CW0606TA-05L-AMB-EX-GL-MW
LUMINAIRE	Nom 6" diam cylinder luminaire
OTHER	Beam Angle: 88.1 degrees
OTHER	Matte white trim; Clear glass lens
LAMPCAT	N/A
LAMP	N/A, Amber in color, 590 nM
OTHER	CCT Output Multipliers: N/A
OTHER	Total luminaire wattages is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	N/A, Amber Light
_CCTMULT	N/A
_LAMPMULT	N/A

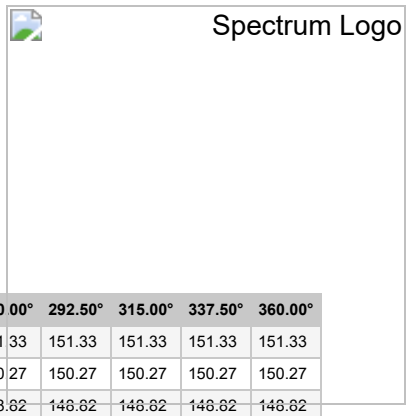
Spectrum Logo

Candela Polar Plot



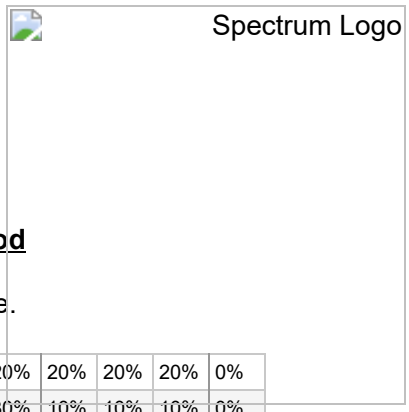
Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	14.26	4.67%	90.00° - 100.00°	0.07	0.02%
10.00° - 20.00°	39.53	12.96%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	62.84	20.59%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	74.21	24.32%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	54.03	17.71%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	30.34	9.94%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	19.39	6.35%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	8.42	2.76%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	2.05	0.67%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	305.07	99.98%	0.00° - 180.00°	305.13	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°	151.33	151.33	151.33	151.33	151.33	151.33	151.33	151.33	151.33	151.33	151.33	151.33	151.33	151.33	151.33	151.33	151.33
2.50°	150.27	150.27	150.27	150.27	150.27	150.27	150.27	150.27	150.27	150.27	150.27	150.27	150.27	150.27	150.27	150.27	150.27
5.00°	148.82	148.82	148.82	148.82	148.82	148.82	148.82	148.82	148.82	148.82	148.82	148.82	148.82	148.82	148.82	148.82	148.82
7.50°	146.69	146.69	146.69	146.69	146.69	146.69	146.69	146.69	146.69	146.69	146.69	146.69	146.69	146.69	146.69	146.69	146.69
10.00°	144.37	144.37	144.37	144.37	144.37	144.37	144.37	144.37	144.37	144.37	144.37	144.37	144.37	144.37	144.37	144.37	144.37
12.50°	141.69	141.69	141.69	141.69	141.69	141.69	141.69	141.69	141.69	141.69	141.69	141.69	141.69	141.69	141.69	141.69	141.69
15.00°	138.94	138.94	138.94	138.94	138.94	138.94	138.94	138.94	138.94	138.94	138.94	138.94	138.94	138.94	138.94	138.94	138.94
17.50°	138.12	138.12	138.12	138.12	138.12	138.12	138.12	138.12	138.12	138.12	138.12	138.12	138.12	138.12	138.12	138.12	138.12
20.00°	137.48	137.48	137.48	137.48	137.48	137.48	137.48	137.48	137.48	137.48	137.48	137.48	137.48	137.48	137.48	137.48	137.48
22.50°	137.15	137.15	137.15	137.15	137.15	137.15	137.15	137.15	137.15	137.15	137.15	137.15	137.15	137.15	137.15	137.15	137.15
25.00°	136.74	136.74	136.74	136.74	136.74	136.74	136.74	136.74	136.74	136.74	136.74	136.74	136.74	136.74	136.74	136.74	136.74
27.50°	134.88	134.88	134.88	134.88	134.88	134.88	134.88	134.88	134.88	134.88	134.88	134.88	134.88	134.88	134.88	134.88	134.88
30.00°	132.64	132.64	132.64	132.64	132.64	132.64	132.64	132.64	132.64	132.64	132.64	132.64	132.64	132.64	132.64	132.64	132.64
32.50°	127.53	127.53	127.53	127.53	127.53	127.53	127.53	127.53	127.53	127.53	127.53	127.53	127.53	127.53	127.53	127.53	127.53
35.00°	121.42	121.42	121.42	121.42	121.42	121.42	121.42	121.42	121.42	121.42	121.42	121.42	121.42	121.42	121.42	121.42	121.42
37.50°	110.87	110.87	110.87	110.87	110.87	110.87	110.87	110.87	110.87	110.87	110.87	110.87	110.87	110.87	110.87	110.87	110.87
40.00°	99.21	99.21	99.21	99.21	99.21	99.21	99.21	99.21	99.21	99.21	99.21	99.21	99.21	99.21	99.21	99.21	99.21
42.50°	84.14	84.14	84.14	84.14	84.14	84.14	84.14	84.14	84.14	84.14	84.14	84.14	84.14	84.14	84.14	84.14	84.14
45.00°	69.65	69.65	69.65	69.65	69.65	69.65	69.65	69.65	69.65	69.65	69.65	69.65	69.65	69.65	69.65	69.65	69.65
47.50°	56.49	56.49	56.49	56.49	56.49	56.49	56.49	56.49	56.49	56.49	56.49	56.49	56.49	56.49	56.49	56.49	56.49
50.00°	45.59	45.59	45.59	45.59	45.59	45.59	45.59	45.59	45.59	45.59	45.59	45.59	45.59	45.59	45.59	45.59	45.59
52.50°	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40
55.00°	32.81	32.81	32.81	32.81	32.81	32.81	32.81	32.81	32.81	32.81	32.81	32.81	32.81	32.81	32.81	32.81	32.81
57.50°	29.24	29.24	29.24	29.24	29.24	29.24	29.24	29.24	29.24	29.24	29.24	29.24	29.24	29.24	29.24	29.24	29.24
60.00°	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92
62.50°	22.85	22.85	22.85	22.85	22.85	22.85	22.85	22.85	22.85	22.85	22.85	22.85	22.85	22.85	22.85	22.85	22.85
65.00°	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67
67.50°	16.41	16.41	16.41	16.41	16.41	16.41	16.41	16.41	16.41	16.41	16.41	16.41	16.41	16.41	16.41	16.41	16.41
70.00°	13.28	13.28	13.28	13.28	13.28	13.28	13.28	13.28	13.28	13.28	13.28	13.28	13.28	13.28	13.28	13.28	13.28
72.50°	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10.21
75.00°	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72	7.72
77.50°	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54	5.54
80.00°	3.79	3.79	3.79	3.79	3.79	3.79	3.79	3.79	3.79	3.79	3.79	3.79	3.79	3.79	3.79	3.79	3.79
82.50°	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47
85.00°	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65
87.50°	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28
90.00°	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
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.

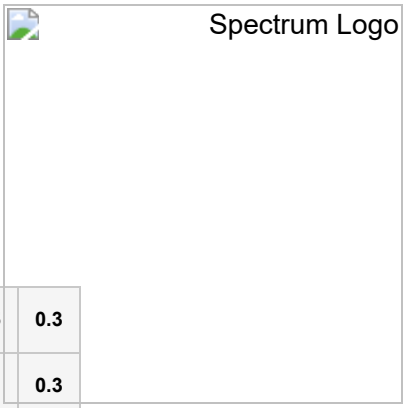
	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	363	363	363	363	355	355	355	355	339	339	339	325	325	325	311	311	311	305
	1	338	327	316	307	330	320	310	302	307	299	292	295	289	283	285	280	275	274
	2	313	293	275	261	306	287	271	258	277	263	252	267	256	246	258	249	241	244
	3	290	263	242	225	283	258	239	223	250	233	219	242	227	216	234	222	212	218
	4	269	237	214	197	262	233	212	195	226	208	193	219	203	190	213	199	188	195
RCR	5	250	215	191	174	244	212	190	173	206	186	171	200	183	169	195	180	168	176
	6	232	196	172	155	227	194	171	154	188	168	153	183	165	152	179	163	150	160
	7	217	180	156	139	212	177	155	138	173	152	138	169	150	137	165	148	136	146
	8	203	165	142	126	198	163	141	125	160	139	125	156	137	124	153	136	123	133
	9	190	153	130	114	186	151	129	114	148	128	113	145	126	113	142	125	112	123
	10	179	142	119	105	175	140	119	104	137	118	104	135	116	104	132	115	103	113

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	5.0 fc	10.6 ft
6.5 ft	3.6 fc	12.5 ft
7.5 ft	2.7 fc	14.5 ft
8.0 ft	2.4 fc	15.4 ft
10.0 ft	1.5 fc	19.3 ft
12.0 ft	1.1 fc	23.1 ft
14.0 ft	0.8 fc	27.0 ft
16.0 ft	0.6 fc	30.9 ft
20.0 ft	0.4 fc	38.6 ft
24.0 ft	0.3 fc	46.3 ft
28.0 ft	0.2 fc	54.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	8,296	8,296	8,296
45.00°	5,400	5,400	5,400
55.00°	3,136	3,136	3,136
65.00°	2,551	2,551	2,551
75.00°	1,635	1,635	1,635
85.00°	1,040	1,040	1,040



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	13.5	14.9	13.9	15.2	15.6	13.5	14.9	13.9	15.2	15.6
	3H	14.8	16.1	15.2	16.4	16.8	14.8	16.1	15.2	16.4	16.8
	4H	15.2	16.3	15.6	16.7	17.1	15.2	16.3	15.6	16.7	17.1
	6H	15.3	16.4	15.8	16.8	17.2	15.3	16.4	15.8	16.8	17.2
	8H	15.4	16.4	15.8	16.8	17.2	15.4	16.4	15.8	16.8	17.2
	12H	15.4	16.4	15.8	16.7	17.2	15.4	16.4	15.8	16.7	17.2
4H	2H	14.0	15.2	14.4	15.5	15.9	14.0	15.2	14.4	15.5	15.9
	3H	15.5	16.4	15.9	16.8	17.2	15.5	16.4	15.9	16.8	17.2
	4H	15.9	16.8	16.3	17.2	17.6	15.9	16.8	16.3	17.2	17.6
	6H	16.1	16.9	16.6	17.3	17.8	16.1	16.9	16.6	17.3	17.8
	8H	16.2	16.9	16.7	17.3	17.8	16.2	16.9	16.7	17.3	17.8
	12H	16.2	16.8	16.7	17.3	17.8	16.2	16.8	16.7	17.3	17.8
8H	4H	16.0	16.7	16.5	17.2	17.6	16.0	16.7	16.5	17.2	17.6
	6H	16.3	16.9	16.8	17.4	17.9	16.3	16.9	16.8	17.4	17.9
	8H	16.4	16.9	16.9	17.4	17.9	16.4	16.9	16.9	17.4	17.9
	12H	16.5	16.9	17.0	17.4	18.0	16.5	16.9	17.0	17.4	18.0
12H	4H	16.0	16.6	16.5	17.1	17.6	16.0	16.6	16.5	17.1	17.6
	6H	16.3	16.8	16.8	17.3	17.8	16.3	16.8	16.8	17.3	17.8
	8H	16.4	16.9	16.9	17.4	17.9	16.4	16.9	16.9	17.4	17.9

Corrected UGR values based on total output lumens

SHR = 1.0