

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

CY0608RDGV 15L 35K XX XX MW

Nom 6" diam x 8" H cylindrical shaped decorative downlight

### Test Number

SP-00986\_M-15L

### Test Date

12/24/2019

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

### Summary of Results

#### Power

Input Watts	10 W
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#### Lumen Output

Output Lumens	1149
Efficacy	114.88 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.5
90° - 270° Size	-0.5
Height	0.67

#### Spacing Criterion

Two luminaires, plane 0°	0.85
Two luminaires, plane 90°	0.85
Four luminaires	0.77

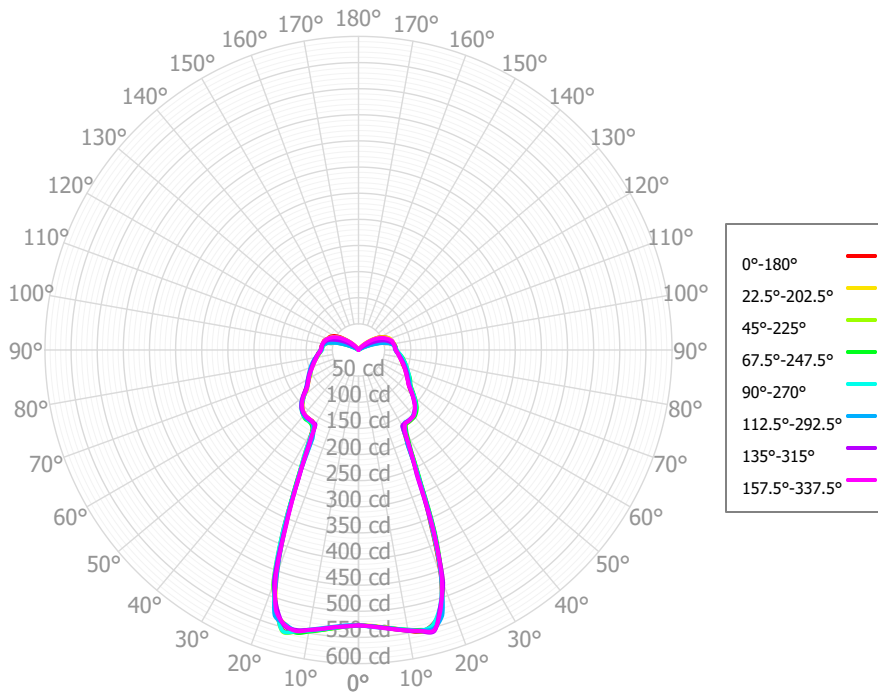
#### Full Beam Angle

0° - 180°	50°
90° - 270°	50°

### IES File Header Contents

Keyword	Value
TEST	SP-00986_M-15L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	12/24/2019
ISSUEDATE	4/7/2020
LUMCAT	CY0608RDGV 15L 35K XX XX MW
LUMINAIRE	Nom 6" diam x 8" H cylindrical shaped decorative downlight
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multipliers: 27K x 0.97, 30K x 0.99, 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting, scaled from 27L

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	52.11	4.54%	90.00° - 100.00°	76.42	6.65%
10.00° - 20.00°	149.78	13.04%	100.00° - 110.00°	64.25	5.59%
20.00° - 30.00°	131.24	11.42%	100.00° - 120.00°	103.97	9.05%
30.00° - 40.00°	104.13	9.06%	120.00° - 130.00°	18.29	1.59%
40.00° - 50.00°	117.66	10.24%	130.00° - 140.00°	5.87	0.51%
50.00° - 60.00°	108.59	9.45%	140.00° - 150.00°	1.26	0.11%
60.00° - 70.00°	101.56	8.84%	150.00° - 160.00°	0.46	0.04%
70.00° - 80.00°	93.57	8.14%	160.00° - 170.00°	0.28	0.02%
80.00° - 90.00°	83.54	7.27%	170.00° - 180.00°	0.09	0.01%
0.00° - 90.00°	942.17	82.01%	0.00° - 180.00°	1,148.81	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°	527.29	527.29	527.29	527.29	527.29	527.29	527.29	527.29	527.29	527.29	527.29	527.29	527.29	527.29	527.29	527.29	527.29
2.50°	529.37	528.18	529.28	529.14	530.30	527.47	529.60	529.26	528.86	529.63	529.56	529.83	529.49	528.98	529.50	529.66	529.37
5.00°	533.28	532.43	532.98	533.21	533.82	531.61	532.89	532.56	533.53	534.20	534.11	534.21	533.66	533.32	533.21	534.11	533.28
7.50°	539.22	537.70	538.33	538.08	538.46	537.03	538.47	538.12	539.02	540.33	539.81	540.61	539.29	538.25	539.24	539.33	539.22
10.00°	545.53	544.46	544.07	543.88	543.67	543.53	543.93	544.19	545.11	546.54	545.61	547.26	545.37	544.82	545.63	545.05	545.53
12.50°	552.25	549.59	552.33	548.71	550.26	550.30	548.88	550.90	550.78	552.78	552.10	554.08	551.46	550.16	551.68	550.59	552.25
15.00°	544.93	552.51	554.04	552.46	545.87	543.25	546.89	544.83	556.16	543.21	558.63	546.04	557.55	552.34	557.68	556.02	544.93
17.50°	523.13	526.55	519.54	525.13	517.56	533.09	518.93	524.12	522.97	525.92	519.23	528.71	521.65	532.83	518.10	522.05	523.13
20.00°	461.47	463.93	473.24	466.44	465.70	456.06	472.63	463.07	466.20	456.72	477.90	461.46	475.15	461.92	473.57	466.59	461.47
22.50°	362.06	382.73	371.16	385.67	365.73	365.37	365.76	359.56	379.72	363.81	377.07	365.70	381.03	380.77	371.20	376.62	362.06
25.00°	277.03	279.89	276.96	283.86	277.52	277.57	270.54	272.79	276.15	279.36	275.09	282.50	276.45	277.68	264.03	269.54	277.03
27.50°	204.50	212.05	216.66	218.14	211.18	190.26	209.59	202.67	214.84	198.41	220.33	205.83	219.86	201.93	213.97	211.84	204.50
30.00°	170.37	181.64	168.92	184.03	168.64	172.00	164.74	167.33	175.70	171.47	166.66	175.70	172.33	179.40	167.73	177.14	170.37
32.50°	167.79	166.71	168.53	168.51	166.47	163.78	163.97	163.77	162.74	164.62	165.44	168.30	165.46	165.08	165.72	166.72	167.79
35.00°	166.54	167.45	168.03	167.92	165.21	163.48	163.28	162.14	162.26	162.90	164.23	166.27	165.47	165.78	165.62	166.54	166.54
37.50°	166.29	167.03	167.20	167.28	165.41	164.18	162.81	162.13	161.72	162.95	163.32	166.63	164.53	165.30	164.84	165.55	166.29
40.00°	163.73	165.55	165.50	166.60	163.96	162.28	161.65	160.46	161.17	160.38	162.20	163.92	163.46	162.85	164.05	164.26	163.73
42.50°	159.57	161.57	161.13	163.08	160.09	160.12	158.97	157.45	157.68	156.99	157.54	159.98	159.07	159.07	158.38	159.23	159.57
45.00°	153.16	155.47	155.84	157.59	154.82	154.32	154.83	152.43	153.02	151.53	152.60	153.28	154.31	153.25	152.64	152.87	153.16
47.50°	145.28	147.06	148.03	149.50	147.68	148.25	147.63	145.94	145.72	145.51	144.18	145.55	145.39	145.59	143.90	144.48	145.28
50.00°	135.62	136.81	139.36	139.76	139.17	137.96	139.35	136.91	137.46	135.43	135.79	136.23	136.06	135.26	135.15	135.46	135.62
52.50°	124.91	127.83	128.53	130.91	128.93	127.44	128.99	126.18	128.81	124.32	127.69	126.38	127.28	126.69	126.19	126.59	124.91
55.00°	117.83	119.78	119.73	122.60	121.31	121.85	120.70	118.99	120.03	118.35	119.89	120.07	118.53	120.43	117.46	117.76	117.83
57.50°	112.72	114.03	115.66	117.52	116.73	116.44	115.98	113.97	114.65	113.49	114.51	114.81	114.61	115.18	112.86	112.22	112.72
60.00°	108.23	109.83	111.35	114.21	112.71	112.11	111.47	109.74	110.29	108.80	109.31	110.14	110.92	111.16	108.34	107.53	108.23
62.50°	104.04	105.72	106.55	109.92	109.27	107.80	107.30	105.95	106.18	104.13	105.39	105.64	106.07	107.01	104.93	103.44	104.04
65.00°	100.12	101.67	102.13	105.13	105.62	104.30	103.15	101.79	102.15	100.89	101.54	102.39	101.19	102.72	101.48	99.48	100.12
67.50°	96.33	97.92	98.45	101.41	101.76	100.80	99.02	97.45	98.37	97.89	98.03	99.45	98.40	98.95	97.62	96.12	96.33
70.00°	92.57	94.33	94.76	98.18	98.20	97.52	95.31	93.70	94.65	94.27	94.55	95.80	95.62	95.73	93.82	92.88	92.57
72.50°	88.82	91.15	91.04	94.99	94.91	94.22	92.17	90.25	91.28	90.56	91.14	92.02	92.42	92.36	90.48	89.60	88.82
75.00°	85.85	88.19	87.76	91.81	91.43	90.66	89.05	87.06	87.98	87.61	87.68	88.98	89.18	88.85	87.18	86.30	85.85
77.50°	83.17	84.96	85.20	88.73	87.79	87.10	85.94	84.00	84.99	84.75	83.98	86.08	85.25	85.42	84.13	83.14	83.17
80.00°	80.78	81.61	82.57	85.69	84.60	83.46	82.83	81.55	82.05	81.41	80.50	82.50	81.38	82.06	81.10	79.99	80.78
82.50°	78.48	78.63	79.83	81.79	81.75	79.90	79.73	79.35	79.75	78.04	77.91	78.83	78.97	78.72	78.21	77.82	78.48
85.00°	75.82	75.81	77.01	77.61	78.60	77.26	76.68	76.63	77.55	75.92	75.38	75.77	76.49	75.40	75.45	75.76	75.82
87.50°	73.04	73.62	74.07	74.95	75.20	74.71	73.66	73.72	74.96	73.88	73.11	72.80	73.00	72.70	73.31	73.31	73.04
90.00°	71.89	71.68	72.22	72.78	73.06	72.95	71.67	72.34	72.32	72.55	71.25	71.29	69.79	70.47	71.46	70.82	71.89
92.50°	71.19	71.15	71.79	71.81	71.77	71.33	70.72	71.48	71.91	71.25	70.66	69.94	69.44	69.52	70.96	70.02	71.19
95.00°	70.30	71.15	70.99	71.19	70.41	70.73	70.15	71.00	71.73	70.70	70.02	68.90	68.97	69.46	70.36	69.35	70.30
97.50°	69.37	70.21	69.77	68.83	69.01	69.76	69.94	70.63	70.53	70.16	69.26	67.90	67.43	67.61	69.40	68.70	69.37
100.00°	68.48	68.95	68.33	66.04	66.28	66.47	69.02	69.73	69.23	69.35	68.28	64.76	65.53	64.56	67.98	68.06	68.48
102.50°	67.60	67.66	66.64	60.77	62.77	62.44	67.49	68.68	68.68	68.53	66.79	61.48	61.07	59.23	64.92	67.35	67.60
105.00°	65.79	66.36	64.02	54.93	55.37	54.36	65.12	67.16	68.18	67.00	64.90	54.21	55.97	52.52	61.69	66.64	65.79
107.50°	63.79	65.08	60.43	46.06	45.91	45.96	62.05	65.51	65.64	65.45	62.12	46.78	47.04	43.35	57.91	63.82	63.79
110.00°	62.01	63.82	56.02	36.59	37.08	36.01	57.35	62.90	63.02	63.25	58.63	36.35	38.16	32.82	53.55	60.97	62.01
112.50°	60.26	60.70	50.84	27.42	28.56	26.49	51.41	60.07	61.49	60.99	53.64	25.85	29.57	24.05	47.54	57.51	60.26

### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	<b>0</b>	1,318	1,318	1,318	1,318	1,264	1,264	1,264	1,264	1,162	1,162	1,162	1,068	1,068	1,068	982	982	982	942
	<b>1</b>	1,179	1,115	1,058	1,007	1,126	1,069	1,017	971	981	940	902	901	868	838	827	801	778	766
	<b>2</b>	1,072	972	889	819	1,022	932	857	793	857	796	743	789	739	696	725	686	651	655
	<b>3</b>	982	859	764	688	935	825	738	669	761	690	631	702	644	594	648	600	559	573
	<b>4</b>	904	768	669	592	862	739	648	577	684	608	547	634	570	518	586	534	490	510
	<b>5</b>	838	694	593	519	799	669	576	507	622	543	483	578	511	459	536	481	436	461
	<b>6</b>	779	632	533	462	744	610	518	452	569	490	432	531	464	412	495	438	393	420
	<b>7</b>	728	579	483	415	696	560	471	407	524	447	390	491	424	374	459	402	358	386
	<b>8</b>	682	534	441	377	653	518	431	370	486	410	356	456	390	342	428	371	328	357
	<b>9</b>	641	495	406	345	615	481	397	339	453	379	327	426	362	315	402	345	304	333
	<b>10</b>	605	461	376	319	581	448	368	313	424	352	303	400	337	292	378	322	282	311

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	17.4 fc	5.1 ft
6.5 ft	12.5 fc	6.0 ft
7.5 ft	9.4 fc	7.0 ft
8.0 ft	8.2 fc	7.4 ft
10.0 ft	5.3 fc	9.3 ft
12.0 ft	3.7 fc	11.2 ft
14.0 ft	2.7 fc	13.0 ft
16.0 ft	2.1 fc	14.9 ft
20.0 ft	1.3 fc	18.6 ft
24.0 ft	0.9 fc	22.3 ft
28.0 ft	0.7 fc	26.0 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	28,906	28,906	28,906
<b>45.00°</b>	4,388	4,465	4,435
<b>55.00°</b>	3,277	3,330	3,374
<b>65.00°</b>	2,788	2,844	2,941
<b>75.00°</b>	2,468	2,523	2,629
<b>85.00°</b>	2,326	2,363	2,411

**UGR CIE 190:2010**

<b>Ceiling reflectance</b>		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
<b>Wall reflectance</b>		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
<b>Plane reflectance</b>		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Room dimensions</b>		<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>2H</b>	2H	-	-	-	-	-	-	-	-	-	-
	3H	-	-	-	-	-	-	-	-	-	-
	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
<b>4H</b>	2H	-	-	-	-	-	-	-	-	-	-
	3H	-	-	-	-	-	-	-	-	-	-
	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
<b>8H</b>	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
<b>12H</b>	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-

Corrected UGR values based on total output lumens

SHR = 1.0