Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

RG1817GV 15L35K EX CD MWI

Nom 18 inch diam round Banco Pendant decorative luminaire

Test Number

SP-00556_1_M-15L

Test Date

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

Summary of Results

Power

Input Watts	10 W

Lumen Output

Output Lumens	1105
Efficacy	110.48 lm/W

Luminous Dimensions

0° - 180° Size	-1.5
90° - 270° Size	-1.5
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.27
Two luminaires, plane 90°	1.29
Four luminaires	1.26

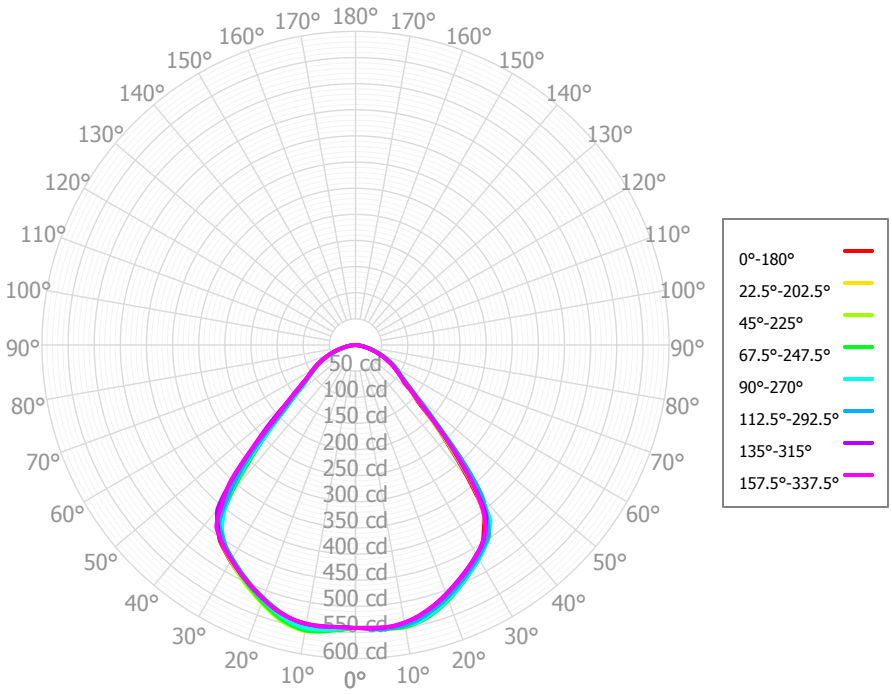
Full Beam Angle

0° - 180°	87°
90° - 270°	87°

IES File Header Contents

Keyword	Value
TEST	SP-00556_1_M-15L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	4/30/2019
UPDATE	6/12/2019
LUMCAT	RG1817GV 15L35K EX CD MWI
LUMINAIRE	Nom 18 inch diam round Banco Pendant decorative luminaire
LAMPCAT	N/A
LAMP	N/A; CRI: 80
OTHER	CCT Output Multipliers; 27K x 0.97, 30K x 0.99, 40K x 1.03
OTHER	Total luminaire wattages is approximate
OTHER	This report prepared by Spectrum Lighting, scaled from 55L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	52.84	4.78%	90.00° - 100.00°	0.03	0.00%
10.00° - 20.00°	150.91	13.66%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	228.07	20.64%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	272.20	24.64%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	190.47	17.24%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	102.41	9.27%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	68.60	6.21%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	33.07	2.99%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	6.21	0.56%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	1,104.78	100.00%	0.00° - 180.00°	1,104.81	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°	541.57	541.57	541.57	541.57	541.57	541.57	541.57	541.57	541.57	541.57	541.57	541.57	541.57	541.57	541.57	541.57	541.57
2.50°	541.96	542.06	542.70	542.03	541.70	540.55	540.75	540.85	541.51	542.89	544.32	545.20	543.34	543.48	543.05	541.97	541.96
5.00°	543.35	545.23	544.44	544.01	543.32	540.99	541.47	541.70	543.17	545.64	548.39	548.93	546.91	546.07	543.54	542.92	543.35
7.50°	545.12	546.85	547.79	546.00	545.89	542.74	541.85	542.94	544.54	549.39	552.10	553.31	549.27	546.56	542.85	542.64	545.12
10.00°	542.53	547.11	547.98	547.99	545.49	541.99	541.95	541.54	545.52	550.16	555.65	554.31	549.96	545.17	539.39	539.39	542.53
12.50°	538.01	543.14	544.07	544.48	543.72	539.42	539.07	539.53	543.89	548.67	552.52	550.52	546.78	540.28	533.78	534.64	538.01
15.00°	530.15	536.01	537.32	538.92	536.85	533.11	534.03	533.52	538.97	542.53	546.63	543.86	538.86	532.70	526.16	526.84	530.15
17.50°	521.06	526.65	527.40	529.81	528.01	524.46	526.39	526.77	531.76	533.39	536.59	533.60	529.60	523.92	517.17	518.16	521.06
20.00°	510.54	515.80	516.91	519.62	517.64	514.97	517.12	516.80	522.07	522.81	525.09	522.42	518.93	514.30	506.95	507.95	510.54
22.50°	499.59	504.41	505.88	508.00	506.80	505.03	507.19	506.41	511.48	511.41	513.56	510.22	507.89	503.51	496.01	497.48	499.59
25.00°	487.97	492.71	494.28	496.02	495.16	494.23	496.91	496.16	500.06	499.68	502.03	498.18	496.53	492.04	485.16	486.59	487.97
27.50°	476.18	480.74	482.19	484.28	483.30	483.02	485.94	485.92	488.85	487.80	489.53	486.28	485.06	480.79	474.37	475.46	476.18
30.00°	463.85	468.64	469.48	472.59	471.55	471.50	474.64	475.16	477.83	476.21	476.80	474.11	473.51	469.66	462.96	464.01	463.85
32.50°	451.42	454.28	456.33	459.21	459.82	459.85	463.52	464.36	466.16	464.74	464.16	461.73	460.54	457.04	451.30	450.48	451.42
35.00°	428.36	438.98	434.14	445.59	442.24	444.72	452.46	451.30	454.01	448.38	451.53	443.37	446.59	443.79	432.13	434.60	428.36
37.50°	403.73	399.67	406.09	409.88	423.73	428.41	433.30	437.56	431.25	430.35	421.75	420.77	416.50	413.12	410.25	401.66	403.73
40.00°	338.96	352.08	348.58	371.85	365.00	379.73	411.44	397.13	402.05	378.22	389.63	368.67	376.91	376.24	352.73	352.18	338.96
42.50°	269.82	286.36	274.79	298.45	301.90	322.29	350.54	354.78	341.85	316.49	316.29	298.69	313.34	309.91	284.73	292.36	269.82
45.00°	216.87	215.57	219.21	222.74	239.69	257.55	279.14	278.76	265.14	252.86	239.23	238.53	237.38	234.98	228.09	223.64	216.87
47.50°	164.98	175.34	172.15	183.62	177.55	191.25	222.77	206.42	210.73	188.81	195.58	183.59	188.86	189.17	174.10	176.29	164.98
50.00°	140.58	142.23	142.93	145.66	150.20	157.35	169.58	170.85	166.36	156.95	153.51	149.92	152.28	150.45	144.63	144.73	140.58
52.50°	116.93	123.48	120.95	127.04	124.04	128.97	140.87	137.48	138.51	130.57	132.37	125.82	129.03	128.08	119.82	122.56	116.93
55.00°	106.12	107.28	107.88	108.83	111.50	113.48	116.30	119.04	116.87	115.56	111.79	111.09	110.61	108.79	106.76	106.34	106.12
57.50°	95.34	97.43	97.80	99.64	99.08	99.55	103.80	102.04	104.26	102.03	101.98	99.86	99.12	98.37	95.34	94.82	95.34
60.00°	85.43	88.40	88.04	90.38	89.79	89.72	92.75	92.66	94.57	91.73	92.13	89.54	89.76	89.17	85.33	85.92	85.43
62.50°	75.49	78.00	78.38	80.21	80.41	80.21	82.80	83.07	84.31	81.71	81.63	79.52	79.94	78.68	75.45	76.24	75.49
65.00°	65.28	67.47	68.21	70.06	69.81	70.22	72.93	72.55	73.91	70.97	71.12	68.97	70.00	68.07	65.00	66.19	65.28
67.50°	55.13	57.52	57.92	59.95	59.43	60.21	62.83	62.32	63.62	60.24	60.54	58.30	59.47	57.84	54.57	56.12	55.13
70.00°	45.31	47.61	47.98	49.98	50.04	50.23	52.80	52.76	53.36	50.23	50.32	48.35	48.90	47.70	44.97	46.04	45.31
72.50°	35.91	37.82	38.35	40.33	40.69	40.72	43.21	43.24	43.39	40.63	41.04	38.67	39.58	37.98	35.75	36.69	35.91
75.00°	27.04	29.13	29.78	31.64	31.43	32.11	34.37	33.76	34.08	31.83	32.16	29.80	30.76	28.85	27.33	27.94	27.04
77.50°	19.90	21.52	21.95	23.57	23.56	24.21	26.22	25.83	25.65	23.93	23.70	22.20	22.61	20.43	19.91	20.30	19.90
80.00°	13.39	14.45	14.89	15.92	16.44	16.89	18.61	18.38	18.11	16.66	16.29	15.40	15.57	14.24	13.04	13.44	13.39
82.50°	7.53	8.23	8.86	9.63	10.11	10.53	11.95	11.53	11.72	10.25	10.34	9.06	9.01	8.72	6.94	7.30	7.53
85.00°	2.78	3.40	3.89	4.82	4.83	5.40	6.26	5.72	6.24	5.04	4.72	3.62	4.13	3.42	2.60	2.81	2.78
87.50°	0.49	0.63	0.80	0.94	1.35	1.31	1.70	1.65	1.92	1.11	1.15	0.88	0.92	0.63	0.57	0.48	0.49
90.00°	0.43	0.17	0.37	0.19	0.31	0.16	0.15	0.23	0.18	0.33	0.16	0.29	0.18	0.24	0.25	0.22	0.43
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	1,315	1,315	1,315	1,315	1,285	1,285	1,285	1,285	1,228	1,228	1,228	1,175	1,175	1,175	1,127	1,127	1,127	1,105
	1	1,226	1,184	1,146	1,112	1,197	1,159	1,125	1,094	1,113	1,085	1,060	1,071	1,048	1,028	1,032	1,014	997	993
	2	1,136	1,061	999	947	1,109	1,041	984	936	1,003	956	915	969	929	895	936	904	875	885
	3	1,052	955	879	819	1,027	938	868	812	907	847	798	878	827	785	851	808	772	791
	4	976	863	780	717	953	849	772	712	823	756	703	799	741	694	776	726	685	711
RCR	5	908	784	698	634	886	772	692	631	750	679	625	730	667	619	711	656	612	643
	6	845	716	629	566	826	706	624	564	687	614	560	670	605	555	653	596	551	584
	7	789	656	570	509	772	648	566	508	632	558	505	617	551	501	603	543	498	533
	8	739	604	520	461	723	597	516	460	583	510	458	570	504	455	558	498	453	489
	9	693	559	476	420	679	552	473	419	541	468	418	529	463	416	519	458	414	450
	10	652	518	438	385	639	513	436	384	503	432	383	493	427	381	484	423	380	416

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	17.9 fc	10.2 ft
6.5 ft	12.8 fc	12.1 ft
7.5 ft	9.6 fc	13.9 ft
8.0 ft	8.5 fc	14.8 ft
10.0 ft	5.4 fc	18.5 ft
12.0 ft	3.8 fc	22.3 ft
14.0 ft	2.8 fc	26.0 ft
16.0 ft	2.1 fc	29.7 ft
20.0 ft	1.4 fc	37.1 ft
24.0 ft	0.9 fc	44.5 ft
28.0 ft	0.7 fc	51.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	3,299	3,299	3,299
45.00°	1,868	1,888	2,065
55.00°	1,127	1,146	1,184
65.00°	941	983	1,006
75.00°	636	701	740
85.00°	194	272	338

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	9.7	11.1	10.1	11.4	11.7	10.0	11.3	10.3	11.7	12.0
	3H	11.1	12.4	11.5	12.7	13.0	11.4	12.7	11.8	13.0	13.4
	4H	11.5	12.7	11.9	13.0	13.4	11.9	13.1	12.3	13.4	13.8
	6H	11.7	12.8	12.1	13.2	13.5	12.2	13.2	12.6	13.6	14.0
	8H	11.8	12.8	12.2	13.1	13.6	12.2	13.2	12.6	13.6	14.0
	12H	11.7	12.7	12.2	13.1	13.5	12.2	13.2	12.6	13.6	14.0
4H	2H	10.2	11.4	10.6	11.7	12.1	10.5	11.7	10.9	12.0	12.4
	3H	11.8	12.8	12.2	13.2	13.6	12.2	13.1	12.6	13.5	13.9
	4H	12.3	13.2	12.7	13.6	14.0	12.7	13.6	13.2	14.0	14.4
	6H	12.6	13.3	13.1	13.8	14.2	13.1	13.8	13.5	14.3	14.7
	8H	12.6	13.3	13.1	13.8	14.2	13.1	13.8	13.6	14.3	14.7
	12H	12.6	13.2	13.1	13.7	14.2	13.2	13.8	13.7	14.3	14.7
8H	4H	12.5	13.2	12.9	13.6	14.1	12.9	13.6	13.4	14.1	14.5
	6H	12.8	13.4	13.3	13.9	14.4	13.4	13.9	13.9	14.4	14.9
	8H	12.9	13.4	13.4	13.9	14.4	13.5	14.0	14.0	14.5	15.0
	12H	12.9	13.3	13.4	13.8	14.4	13.5	14.0	14.0	14.5	15.0
12H	4H	12.5	13.1	12.9	13.6	14.0	12.9	13.5	13.4	14.0	14.5
	6H	12.8	13.3	13.3	13.8	14.3	13.4	13.9	13.9	14.3	14.9
	8H	12.9	13.4	13.4	13.8	14.4	13.5	14.0	14.0	14.5	15.0

Corrected UGR values based on total output lumens

SHR = 1.0