

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

GPRF3600GV 15L 35K EX MW
Nom 36" Globe (Sphere) luminaire

Test Number

SP-00647_7_M-15L

Test Date

1/27/2020

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	1208
Efficacy	120.78 lm/W

Luminous Dimensions

0° - 180° Size	-3
90° - 270° Size	-3
Height	3

Spacing Criterion

Two luminaires, plane 0°	1.47
Two luminaires, plane 90°	1.45
Four luminaires	1.61

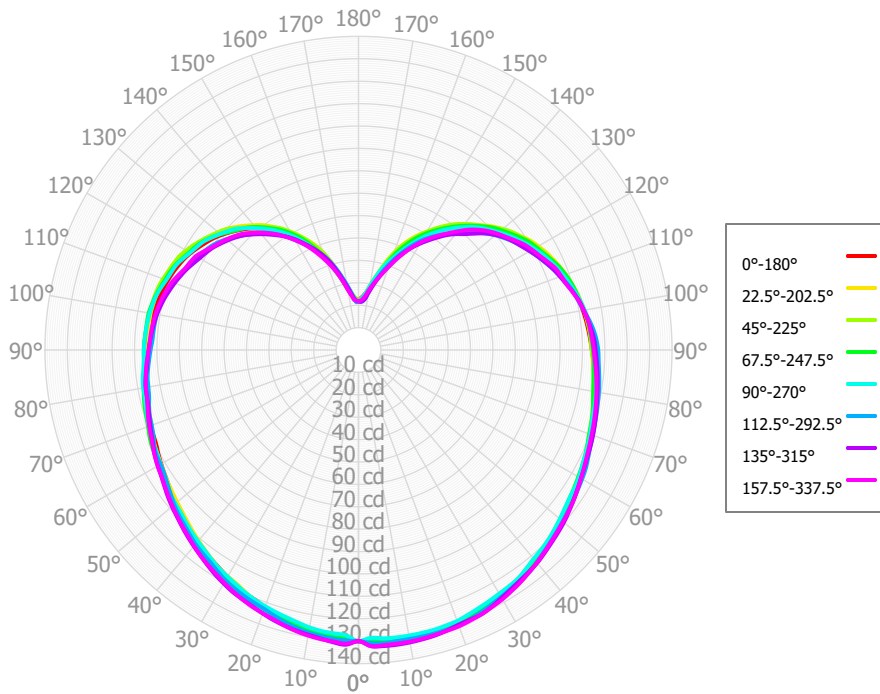
Full Beam Angle

0° - 180°	289°
90° - 270°	288°

IES File Header Contents

Keyword	Value
TEST	SP-00647_7_M-15L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	1/27/2020
ISSUEDATE	1/29/2020
LUMCAT	GPRF3600GV 15L 35K EX MW
LUMINAIRE	Nom 36" Globe (Sphere) luminaire
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 55L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	12.56	1.04%	90.00° - 100.00°	107.91	8.93%
10.00° - 20.00°	36.22	3.00%	100.00° - 110.00°	101.51	8.40%
20.00° - 30.00°	57.66	4.77%	100.00° - 120.00°	192.00	15.90%
30.00° - 40.00°	75.53	6.25%	120.00° - 130.00°	75.94	6.29%
40.00° - 50.00°	89.29	7.39%	130.00° - 140.00°	58.81	4.87%
50.00° - 60.00°	99.17	8.21%	140.00° - 150.00°	40.84	3.38%
60.00° - 70.00°	105.71	8.75%	150.00° - 160.00°	23.98	1.99%
70.00° - 80.00°	109.31	9.05%	160.00° - 170.00°	10.33	0.86%
80.00° - 90.00°	110.08	9.11%	170.00° - 180.00°	2.43	0.20%
0.00° - 90.00°	695.53	57.59%	0.00° - 180.00°	1,207.78	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°	130.03	130.03	130.03	130.03	130.03	130.03	130.03	130.03	130.03	130.03	130.03	130.03	130.03	130.03	130.03	130.03	130.03
2.50°	130.39	129.64	129.63	130.06	128.67	129.82	131.72	131.25	128.34	128.78	129.06	129.08	127.54	130.97	132.42	132.38	130.39
5.00°	130.50	129.88	129.92	130.13	129.25	129.44	130.97	130.63	127.70	127.98	128.42	128.58	127.03	131.35	132.68	132.27	130.50
7.50°	130.61	130.08	130.23	130.09	129.44	128.85	129.96	130.18	127.06	127.05	127.79	128.10	126.59	131.15	132.72	132.22	130.61
10.00°	130.84	130.23	130.24	129.88	129.50	128.21	129.13	129.49	126.56	126.05	127.15	127.07	125.83	131.05	132.58	132.22	130.84
12.50°	130.97	130.18	130.21	129.77	129.48	127.14	128.38	128.62	125.97	125.03	126.28	125.93	124.68	131.11	132.32	132.01	130.97
15.00°	130.70	129.88	130.23	129.79	129.43	125.98	127.45	127.45	124.84	124.14	125.05	125.06	123.65	131.09	131.98	131.70	130.70
17.50°	130.40	129.69	130.26	129.73	129.12	124.54	126.44	126.12	123.64	123.27	123.85	124.22	122.74	130.99	131.37	131.48	130.40
20.00°	130.04	129.60	129.74	129.59	128.76	123.08	125.18	125.05	122.15	122.15	122.68	123.15	121.79	130.64	130.62	131.30	130.04
22.50°	129.54	129.24	129.20	129.07	127.96	122.09	123.85	124.10	120.79	121.02	121.48	122.07	120.80	130.08	130.32	130.74	129.54
25.00°	128.75	128.69	128.29	128.25	127.12	121.11	122.79	122.82	119.77	119.38	120.28	120.54	119.55	129.28	130.19	130.10	128.75
27.50°	128.08	128.03	127.41	127.34	126.38	119.99	121.78	121.45	118.58	117.78	119.09	119.06	118.16	128.32	129.14	129.32	128.08
30.00°	127.57	127.31	126.77	126.38	125.66	118.80	120.40	119.99	117.02	116.78	117.92	118.20	116.91	127.38	127.85	128.53	127.57
32.50°	126.75	126.32	126.06	125.46	125.10	117.13	119.00	118.51	115.56	115.71	116.41	117.27	115.71	126.45	126.77	127.48	126.75
35.00°	125.54	125.22	125.09	124.55	124.44	115.55	117.42	117.16	114.25	114.16	114.73	115.95	114.28	125.75	125.72	126.43	125.54
37.50°	124.39	124.24	124.06	123.39	123.01	114.41	115.85	115.82	112.96	112.62	113.46	114.60	112.78	125.13	124.92	125.19	124.39
40.00°	123.29	123.29	122.87	122.14	121.69	113.18	114.41	114.24	111.70	111.13	112.36	113.11	111.51	123.85	124.14	123.95	123.29
42.50°	122.15	122.23	121.70	121.05	120.82	111.63	112.97	112.65	110.41	109.66	111.09	111.62	110.27	122.41	122.97	122.66	122.15
45.00°	120.98	121.15	120.55	119.99	119.86	110.16	111.48	111.22	109.09	108.22	109.78	110.15	108.95	121.23	121.81	121.41	120.98
47.50°	119.98	119.92	119.42	118.76	118.64	108.90	110.03	109.80	107.81	106.88	108.70	108.75	107.61	120.09	120.78	120.31	119.98
50.00°	119.08	118.68	118.32	117.51	117.40	107.46	108.72	108.40	106.55	105.75	107.67	107.48	106.70	119.05	119.72	119.23	119.08
52.50°	117.98	117.48	117.19	116.34	116.11	105.73	107.36	107.01	105.21	104.69	106.37	106.33	105.79	118.03	118.44	118.25	117.98
55.00°	116.80	116.30	116.00	115.19	115.09	104.19	105.85	105.65	103.82	103.73	105.06	105.36	104.48	117.07	117.15	117.20	116.80
57.50°	115.41	115.23	114.94	114.26	114.51	102.90	104.50	104.40	102.74	102.81	103.76	104.29	103.20	116.11	115.87	115.97	115.41
60.00°	113.96	114.17	113.99	113.34	113.69	102.06	103.53	103.52	101.78	101.93	102.50	103.12	102.17	115.29	114.67	114.75	113.96
62.50°	113.01	113.06	112.99	112.51	112.59	101.69	102.44	102.55	100.74	101.15	101.71	102.30	101.22	114.42	113.72	113.56	113.01
65.00°	112.15	111.98	111.94	111.64	111.67	100.68	101.15	101.38	99.69	100.47	100.91	101.79	100.66	113.21	112.85	112.49	112.15
67.50°	111.19	111.03	110.82	110.62	110.91	99.18	99.96	100.33	99.17	99.53	100.07	100.98	100.11	112.09	112.15	111.60	111.19
70.00°	110.22	110.14	109.65	109.68	110.07	98.28	98.91	99.48	98.73	98.40	99.26	99.98	99.55	111.33	111.43	110.79	110.22
72.50°	109.53	109.42	108.82	109.03	109.17	97.73	97.99	98.57	98.06	97.72	98.63	99.32	98.95	110.62	110.66	110.07	109.53
75.00°	108.85	108.69	108.13	108.28	108.61	96.84	97.19	97.56	97.38	97.30	98.09	98.82	98.26	110.05	109.87	109.36	108.85
77.50°	107.98	107.94	107.41	107.29	108.23	95.79	96.74	96.82	96.81	96.93	97.84	98.13	97.76	109.50	109.07	108.64	107.98
80.00°	107.13	107.11	106.68	106.43	107.71	95.31	96.55	96.37	96.25	96.57	97.37	97.38	97.60	109.00	108.36	107.90	107.13
82.50°	106.41	106.16	106.49	105.81	107.13	95.00	95.86	95.83	95.67	96.05	96.43	96.67	97.18	108.45	107.73	107.14	106.41
85.00°	105.69	105.36	106.40	105.34	106.46	94.32	94.90	95.24	95.15	95.49	95.82	95.97	96.42	107.81	107.10	106.39	105.69
87.50°	104.92	104.72	105.34	105.08	105.77	93.55	94.26	94.49	95.07	94.98	95.74	95.86	95.98	107.33	106.47	105.63	104.92
90.00°	104.20	104.26	104.18	104.70	105.47	92.86	93.76	93.64	94.93	94.50	95.68	95.85	95.87	107.03	105.89	105.03	104.20
92.50°	103.61	103.97	103.80	104.20	105.24	92.18	93.20	93.20	94.47	94.38	95.63	95.61	95.65	106.34	105.35	104.48	103.61
95.00°	103.03	103.58	103.44	103.70	104.45	91.95	92.63	92.94	94.04	94.30	95.39	95.35	95.35	105.27	104.39	103.91	103.03
97.50°	102.43	103.10	102.91	103.22	103.60	91.74	92.03	92.53	93.72	94.31	94.96	95.26	95.03	103.80	103.26	103.33	102.43
100.00°	101.77	102.23	102.35	102.40	102.50	91.41	91.42	92.07	93.30	94.31	94.65	95.13	94.68	102.04	102.12	102.11	101.77
102.50°	100.99	101.14	101.54	101.37	101.39	91.04	90.53	91.38	92.66	93.99	94.43	94.46	94.15	100.67	100.99	100.79	100.99
105.00°	100.03	100.27	100.69	100.45	100.08	90.27	89.61	90.64	92.01	93.64	94.09	93.75	93.54	99.52	99.26	99.16	100.03
107.50°	98.84	99.50	99.59	99.58	98.76	89.41	88.49	89.65	91.37	93.06	93.67	92.80	92.53	97.88	97.42	97.51	98.84
110.00°	97.50	98.43	98.37	98.35	97.37	87.96	87.35	88.63	90.64	92.48	92.85	91.87	91.39	96.06	95.78	96.38	97.50
112.50°	95.99	97.25	96.76	97.01	95.94	86.60	86.12	87.16	89.82	91.91	91.87	91.06	90.57	94.15	94.16	95.22	95.99

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%	20%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	1,316	1,316	1,316	1,316	1,226	1,226	1,226	1,226	1,057	1,057	1,057	903	903	903	762	762	762	696
	1	1,149	1,074	1,006	945	1,062	995	936	881	849	803	760	715	679	646	591	564	539	507
	2	1,027	911	815	734	945	843	758	686	717	650	592	600	548	503	492	453	418	404
	3	926	786	677	590	851	727	630	552	618	541	477	516	456	405	422	375	336	333
	4	841	687	573	487	773	636	534	456	540	459	395	452	387	335	369	319	278	283
	5	768	606	493	410	706	562	460	384	479	396	333	401	335	283	328	276	235	245
	6	705	540	429	350	648	501	401	328	428	346	285	359	293	243	295	243	202	216
	7	651	485	377	302	599	451	353	284	386	306	247	325	260	211	268	216	176	192
	8	603	438	335	264	555	408	314	248	350	272	217	296	232	186	245	194	155	173
	9	560	399	300	233	517	372	281	219	320	245	192	272	210	165	226	175	138	157
	10	523	365	270	207	483	341	254	195	294	222	171	251	190	148	209	160	124	143

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	4.3 fc	-7.9 ft
6.5 ft	3.1 fc	-9.3 ft
7.5 ft	2.3 fc	-10.8 ft
8.0 ft	2.0 fc	-11.5 ft
10.0 ft	1.3 fc	-14.4 ft
12.0 ft	0.9 fc	-17.2 ft
14.0 ft	0.7 fc	-20.1 ft
16.0 ft	0.5 fc	-23.0 ft
20.0 ft	0.3 fc	-28.7 ft
24.0 ft	0.2 fc	-34.4 ft
28.0 ft	0.2 fc	-40.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	198	198	198
45.00°	115	114	114
55.00°	110	109	108
65.00°	108	108	108
75.00°	111	111	111
85.00°	119	120	120

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	-	-	-	-	-	-	-	-	-	-
	3H	-	-	-	-	-	-	-	-	-	-
	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
4H	2H	-	-	-	-	-	-	-	-	-	-
	3H	-	-	-	-	-	-	-	-	-	-
	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
8H	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
12H	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-

Corrected UGR values based on total output lumens

SHR = 1.0