

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

GPRF2400GV 15L 35K EX MW
Nom 24" Globe (Sphere) luminaire

Test Number

SP-00647_6_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	1261
Efficacy	126.1 lm/W

Luminous Dimensions

0° - 180° Size	-2
90° - 270° Size	-2
Height	2

Spacing Criterion

Two luminaires, plane 0°	1.43
Two luminaires, plane 90°	1.44
Four luminaires	1.61

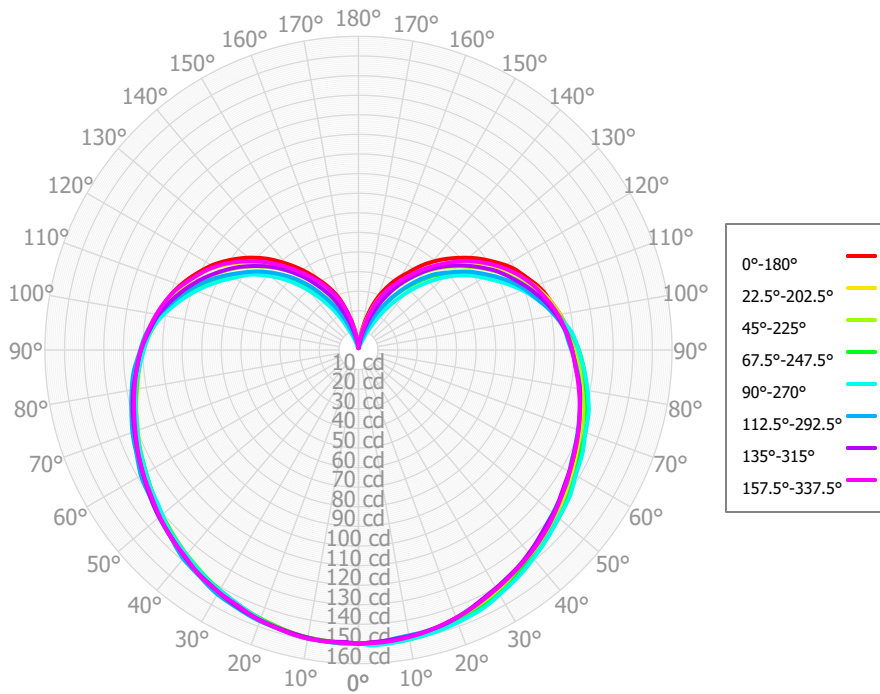
Full Beam Angle

0° - 180°	257°
90° - 270°	238°

IES File Header Contents

Keyword	Value
TEST	SP-00647_6_M-15L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	1/27/2020
ISSUEDATE	1/29/2020
LUMCAT	GPRF2400GV 15L 35K EX MW
LUMINAIRE	Nom 24" 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°	14.49	1.15%	90.00° - 100.00°	116.88	9.27%
10.00° - 20.00°	41.87	3.32%	100.00° - 110.00°	104.04	8.25%
20.00° - 30.00°	66.73	5.29%	100.00° - 120.00°	190.27	15.09%
30.00° - 40.00°	87.63	6.95%	120.00° - 130.00°	65.88	5.22%
40.00° - 50.00°	103.89	8.24%	130.00° - 140.00°	45.15	3.58%
50.00° - 60.00°	115.48	9.16%	140.00° - 150.00°	26.23	2.08%
60.00° - 70.00°	122.47	9.71%	150.00° - 160.00°	11.85	0.94%
70.00° - 80.00°	125.22	9.93%	160.00° - 170.00°	3.23	0.26%
80.00° - 90.00°	123.45	9.79%	170.00° - 180.00°	0.32	0.03%
0.00° - 90.00°	801.24	63.54%	0.00° - 180.00°	1,261.04	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°	149.82	149.82	149.82	149.82	149.82	149.82	149.82	149.82	149.82	149.82	149.82	149.82	149.82	149.82	149.82	149.82	149.82
2.50°	149.41	149.78	149.78	150.04	150.87	149.86	149.23	149.67	149.53	149.62	149.95	150.23	150.16	149.59	149.37	149.79	149.41
5.00°	149.41	149.63	149.92	150.07	150.69	149.73	149.42	149.70	149.48	149.51	149.90	149.69	149.86	149.07	149.04	149.65	149.41
7.50°	149.20	149.46	149.84	150.17	150.40	149.64	149.54	149.65	149.29	149.35	149.57	149.27	149.61	148.29	148.71	149.28	149.20
10.00°	148.83	149.13	149.63	149.89	149.95	149.58	149.05	149.55	149.05	148.95	149.08	149.06	149.11	147.87	148.36	148.78	148.83
12.50°	148.27	148.78	149.05	149.52	149.54	149.10	148.54	149.06	148.76	148.46	148.43	148.59	148.52	147.69	147.98	148.17	148.27
15.00°	147.60	148.15	148.31	148.81	149.19	148.33	147.97	148.33	148.21	147.55	147.75	147.71	147.93	147.25	147.34	147.36	147.60
17.50°	146.64	147.48	147.55	148.04	148.68	147.76	147.37	147.59	147.51	146.69	147.06	146.83	147.33	146.67	146.64	146.40	146.64
20.00°	145.54	146.46	146.79	147.43	147.99	147.30	146.68	146.84	146.48	145.96	146.14	145.94	146.25	145.55	145.55	145.46	145.54
22.50°	144.77	145.43	146.13	146.83	147.31	146.52	145.93	145.69	145.30	145.12	145.06	144.93	145.09	144.18	144.37	144.52	144.77
25.00°	144.13	144.31	145.51	145.89	146.63	145.60	144.98	144.38	144.10	144.00	144.07	143.79	143.83	143.07	142.84	143.31	144.13
27.50°	142.90	143.16	144.35	144.93	145.51	144.78	143.95	143.49	142.89	142.87	143.12	142.63	142.57	142.03	141.42	141.99	142.90
30.00°	141.48	141.92	143.09	143.66	144.08	144.01	142.69	142.70	141.77	141.72	141.87	141.47	141.62	140.63	140.30	140.79	141.48
32.50°	140.39	140.74	141.79	142.38	142.83	142.67	141.52	141.79	140.67	140.47	140.47	140.33	140.68	139.12	139.17	139.63	140.39
35.00°	139.37	139.73	140.49	140.75	141.69	141.19	140.54	140.85	139.55	139.08	138.98	139.20	139.25	138.06	138.03	138.44	139.37
37.50°	138.12	138.51	138.91	139.19	140.32	140.12	139.36	139.26	138.43	137.71	137.45	137.96	137.83	137.09	136.79	137.26	138.12
40.00°	136.83	136.81	137.31	138.34	138.85	139.12	137.89	137.60	136.79	136.36	136.38	136.65	136.49	135.56	135.34	136.04	136.83
42.50°	135.28	135.27	136.32	137.39	137.46	137.32	136.47	136.47	135.06	134.96	135.42	135.23	135.17	133.96	133.83	134.82	135.28
45.00°	133.69	134.02	135.32	135.93	136.09	135.43	135.11	135.37	134.09	133.51	133.87	133.74	133.93	132.37	132.22	133.41	133.69
47.50°	132.39	132.79	133.82	134.53	134.68	134.14	133.85	133.87	133.17	132.19	132.21	132.31	132.59	130.79	130.86	131.97	132.39
50.00°	131.10	131.57	132.36	133.38	133.26	132.87	132.70	132.36	131.62	130.98	130.97	130.89	130.73	129.50	129.78	130.40	131.10
52.50°	129.54	130.36	131.28	132.17	132.24	131.46	131.37	130.80	130.05	129.69	129.79	129.45	129.04	128.23	128.39	128.83	129.54
55.00°	128.01	129.15	130.17	130.74	131.30	130.07	129.88	129.27	128.54	128.33	128.33	128.01	127.95	127.23	126.69	127.31	128.01
57.50°	126.85	127.86	128.79	129.29	129.68	129.18	128.40	127.99	127.06	126.90	126.85	126.59	126.77	126.16	125.30	125.81	126.85
60.00°	125.67	126.49	127.46	127.76	127.96	128.22	126.93	126.71	125.82	125.41	125.32	125.17	125.31	124.34	124.17	124.44	125.67
62.50°	124.26	125.18	126.28	126.30	126.93	126.60	125.56	125.39	124.56	124.12	123.80	123.99	123.95	122.60	122.92	123.09	124.26
65.00°	122.85	123.92	125.01	124.96	125.97	125.05	124.24	124.05	123.12	122.92	122.56	122.84	122.81	121.45	121.60	121.95	122.85
67.50°	121.39	122.57	123.47	123.88	124.58	123.94	122.94	122.59	121.70	121.41	121.32	121.74	121.54	120.29	120.49	120.78	121.39
70.00°	119.98	121.16	121.99	123.18	123.19	122.77	121.65	121.16	120.34	119.78	120.04	120.64	120.03	119.13	119.51	119.48	119.98
72.50°	118.72	119.80	120.69	122.22	122.45	121.37	120.44	119.83	119.03	118.51	118.77	119.20	118.69	118.02	118.28	118.18	118.72
75.00°	117.47	118.47	119.51	120.94	121.67	120.00	119.27	118.53	117.85	117.34	117.55	117.75	117.63	117.04	116.94	116.88	117.47
77.50°	116.25	117.20	118.56	119.54	120.21	118.76	117.98	117.31	116.71	116.03	116.30	116.43	116.56	115.98	115.80	115.56	116.25
80.00°	115.02	115.94	117.43	118.03	118.74	117.54	116.66	116.10	115.66	114.69	114.90	115.11	115.48	114.76	114.73	114.18	115.02
82.50°	113.79	114.71	116.01	116.70	117.17	116.38	115.16	114.87	114.42	113.52	113.60	113.86	114.12	113.45	113.15	112.80	113.79
85.00°	112.42	113.50	114.51	115.52	115.58	114.97	113.62	113.65	112.79	112.37	112.59	112.61	112.46	111.95	111.44	111.41	112.42
87.50°	110.80	112.01	112.89	114.09	113.92	113.09	112.29	112.42	111.25	111.28	111.43	111.35	110.94	110.36	110.21	110.12	110.80
90.00°	109.40	110.46	111.40	112.51	112.30	111.40	110.99	111.04	109.85	110.20	109.91	110.03	109.53	108.61	109.08	109.02	109.40
92.50°	108.32	109.10	110.02	110.55	110.84	110.00	109.22	109.46	108.59	108.84	108.27	108.38	108.08	107.13	107.78	107.82	108.32
95.00°	107.19	107.78	108.24	108.40	108.96	108.27	107.41	107.92	107.53	107.47	106.36	106.61	106.60	106.01	106.47	106.44	107.19
97.50°	105.99	106.10	106.11	106.00	105.92	106.11	105.60	106.43	106.13	105.81	104.53	104.39	104.25	104.21	104.56	104.98	105.99
100.00°	104.42	104.37	103.94	103.49	102.72	103.49	103.77	104.76	104.33	104.13	102.82	101.99	101.42	101.69	102.61	103.42	104.42
102.50°	102.48	102.49	101.75	100.67	99.20	100.37	101.18	102.95	102.58	102.05	100.76	99.09	98.27	98.93	100.29	101.62	102.48
105.00°	100.70	100.59	99.16	97.75	95.79	97.30	98.58	100.93	100.87	99.97	98.24	96.26	94.98	95.95	97.94	99.58	100.70
107.50°	99.06	98.11	96.35	94.33	92.59	94.27	95.80	98.77	98.89	97.81	95.67	93.58	91.59	93.11	95.20	97.50	99.06
110.00°	96.86	95.63	93.40	90.78	89.12	91.09	92.99	96.13	96.70	95.57	93.05	90.60	88.17	90.36	92.44	95.37	96.86
112.50°	94.29	92.90	90.39	87.21	85.27	87.80	90.02	93.21	94.27	92.97	90.03	87.07	84.61	87.25	89.52	92.94	94.29

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	1,392	1,392	1,392	1,392	1,306	1,306	1,306	1,306	1,146	1,146	1,146	999	999	999	865	865	865	801
	1	1,212	1,131	1,058	993	1,128	1,057	992	933	917	866	819	789	749	713	671	641	613	586
	2	1,082	957	854	768	1,003	893	801	723	772	699	636	661	604	553	559	514	474	467
	3	975	824	708	616	902	769	664	580	665	581	511	568	501	445	478	426	381	386
	4	885	720	599	507	819	672	563	478	581	492	422	497	426	368	419	362	315	328
	5	808	636	515	426	748	594	484	402	515	425	356	441	368	311	372	313	266	284
	6	742	566	448	363	687	530	422	344	460	371	305	395	322	266	335	275	229	249
	7	685	508	394	314	634	476	372	297	415	328	264	358	286	232	304	245	200	222
	8	634	460	350	275	589	431	331	260	377	292	232	326	255	204	278	220	176	200
	9	590	419	314	243	548	393	296	230	345	263	205	299	230	181	256	199	157	181
	10	551	383	283	216	513	361	268	205	317	238	184	276	209	162	237	181	141	166

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	5.0 fc	-13.9 ft
6.5 ft	3.5 fc	-16.4 ft
7.5 ft	2.7 fc	-18.9 ft
8.0 ft	2.3 fc	-20.2 ft
10.0 ft	1.5 fc	-25.2 ft
12.0 ft	1.0 fc	-30.3 ft
14.0 ft	0.8 fc	-35.3 ft
16.0 ft	0.6 fc	-40.4 ft
20.0 ft	0.4 fc	-50.5 ft
24.0 ft	0.3 fc	-60.5 ft
28.0 ft	0.2 fc	-70.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	513	513	513
45.00°	285	288	290
55.00°	271	276	278
65.00°	267	272	274
75.00°	270	275	280
85.00°	284	289	292

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