

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

GPRF1200GV 15L 35K EX MW
Nom 12" Globe (Sphere) luminaire

Test Number

SP-00647_3_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	1205
Efficacy	120.46 lm/W

Luminous Dimensions

0° - 180° Size	-1
90° - 270° Size	-1
Height	1

Spacing Criterion

Two luminaires, plane 0°	1.59
Two luminaires, plane 90°	1.56
Four luminaires	1.76

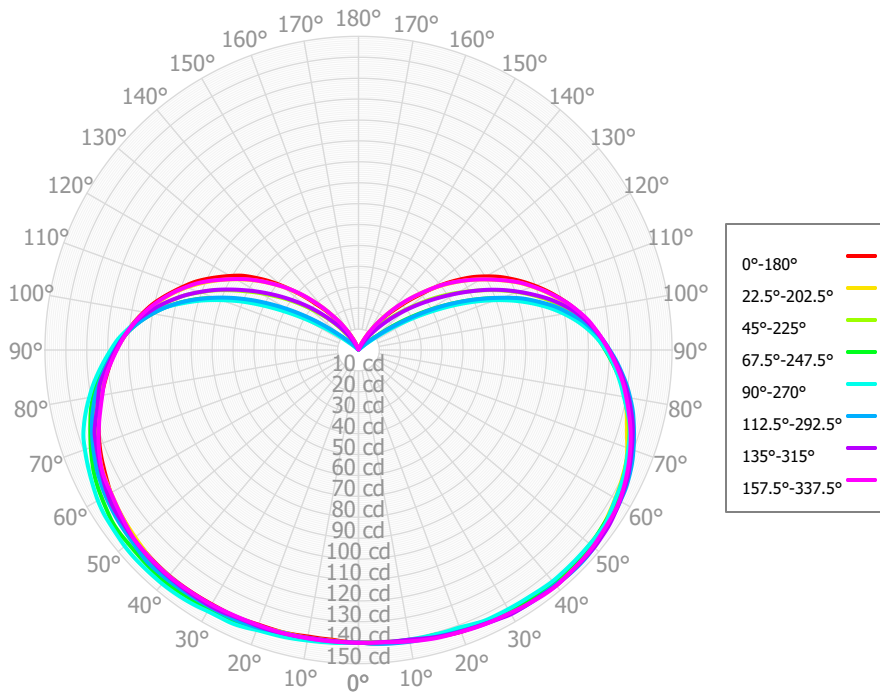
Full Beam Angle

0° - 180°	237°
90° - 270°	218°

IES File Header Contents

Keyword	Value
TEST	SP-00647_3_M-15L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	1/27/2020
ISSUEDATE	1/29/2020
LUMCAT	GPRF1200GV 15L 35K EX MW
LUMINAIRE	Nom 12" 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°	13.61	1.13%	90.00° - 100.00°	121.18	10.06%
10.00° - 20.00°	40.05	3.32%	100.00° - 110.00°	97.79	8.12%
20.00° - 30.00°	66.04	5.48%	100.00° - 120.00°	164.18	13.63%
30.00° - 40.00°	90.32	7.50%	120.00° - 130.00°	35.44	2.94%
40.00° - 50.00°	111.53	9.26%	130.00° - 140.00°	15.27	1.27%
50.00° - 60.00°	127.87	10.61%	140.00° - 150.00°	5.33	0.44%
60.00° - 70.00°	137.85	11.44%	150.00° - 160.00°	0.98	0.08%
70.00° - 80.00°	140.20	11.64%	160.00° - 170.00°	0.12	0.01%
80.00° - 90.00°	134.63	11.18%	170.00° - 180.00°	0.04	0.00%
0.00° - 90.00°	862.09	71.56%	0.00° - 180.00°	1,204.63	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°	140.06	140.06	140.06	140.06	140.06	140.06	140.06	140.06	140.06	140.06	140.06	140.06	140.06	140.06	140.06	140.06	140.06
2.50°	140.52	140.23	139.96	140.19	140.26	139.96	139.90	140.03	139.71	139.90	139.99	140.17	140.34	140.66	140.19	140.19	140.52
5.00°	140.82	140.39	140.25	140.42	140.51	139.94	139.76	140.02	139.24	139.64	140.20	140.36	140.59	141.13	140.26	140.38	140.82
7.50°	141.02	140.75	140.52	140.91	140.59	140.02	139.70	140.03	139.20	139.69	140.42	140.57	140.85	141.45	140.46	140.97	141.02
10.00°	141.23	141.14	140.77	141.34	140.64	140.12	139.78	140.05	139.20	139.82	140.56	140.78	141.14	141.72	140.71	141.57	141.23
12.50°	141.73	141.62	141.27	141.13	140.82	140.08	140.05	140.12	139.54	139.86	140.54	140.91	141.55	141.90	141.40	142.19	141.73
15.00°	142.25	142.05	141.80	141.03	141.00	140.00	140.30	140.19	139.84	139.89	140.61	141.06	141.90	142.16	142.25	142.75	142.25
17.50°	142.90	142.35	142.38	141.73	141.14	140.62	140.52	140.11	139.81	140.23	140.86	141.44	142.14	142.58	142.83	143.11	142.90
20.00°	143.50	142.71	142.96	142.40	141.27	141.35	140.58	140.05	139.85	140.63	141.06	141.85	142.58	143.08	143.31	143.51	143.50
22.50°	143.59	143.16	143.26	142.94	142.07	141.66	140.49	140.15	140.19	140.75	141.17	142.40	143.50	143.74	143.83	144.05	143.59
25.00°	143.80	143.69	143.54	143.45	142.87	141.91	140.73	140.26	140.46	140.84	141.27	142.91	144.10	144.35	144.36	144.54	143.80
27.50°	144.80	144.34	143.74	143.79	143.04	141.98	141.29	140.45	140.44	141.02	141.36	143.18	144.10	144.87	145.14	144.87	144.80
30.00°	145.59	144.70	143.93	144.09	143.22	142.04	141.54	140.64	140.47	141.21	141.54	143.43	144.33	145.46	145.97	145.28	145.59
32.50°	145.43	144.71	144.44	144.22	143.41	142.25	141.55	140.76	140.62	141.27	141.84	143.60	144.99	146.10	146.16	145.88	145.43
35.00°	145.43	144.70	144.94	144.41	143.63	142.47	141.54	140.88	140.78	141.31	142.10	143.82	145.52	146.40	146.25	146.46	145.43
37.50°	146.03	144.67	144.94	144.79	144.07	142.71	141.51	141.05	140.94	141.26	142.33	144.21	145.86	146.34	146.68	146.97	146.03
40.00°	146.43	144.82	144.93	145.03	144.46	142.94	141.47	141.17	141.00	141.21	142.45	144.45	146.07	146.61	147.14	147.22	146.43
42.50°	146.21	145.14	144.95	144.93	144.47	143.07	141.42	141.03	140.85	141.04	142.47	144.32	146.13	147.18	147.10	147.00	146.21
45.00°	145.99	145.29	144.95	144.93	144.48	143.15	141.17	140.88	140.64	140.83	142.27	144.16	146.18	147.42	147.02	146.84	145.99
47.50°	145.75	145.30	144.78	145.15	144.48	142.51	140.82	140.73	140.32	140.13	141.88	143.98	146.21	147.41	147.07	146.73	145.75
50.00°	145.47	145.06	144.60	145.07	144.49	141.88	140.45	140.37	139.85	139.46	141.52	143.88	146.01	147.05	147.13	146.43	145.47
52.50°	145.08	144.64	144.40	144.44	144.54	141.47	140.08	139.44	139.12	138.90	141.17	143.98	145.56	146.45	146.74	145.88	145.08
55.00°	144.52	143.87	144.09	143.92	144.31	141.04	139.73	138.52	138.44	138.31	140.44	143.68	145.17	145.85	146.32	145.40	144.52
57.50°	143.62	142.88	143.23	143.57	143.14	140.40	139.40	137.59	137.81	137.50	139.45	142.73	144.81	145.24	145.43	145.00	143.62
60.00°	142.72	141.92	142.33	142.94	142.07	139.72	138.45	136.80	136.90	136.72	138.58	141.78	144.00	144.64	144.52	144.19	142.72
62.50°	141.85	140.98	141.26	141.95	141.29	138.82	137.33	136.29	135.62	136.09	137.79	140.84	142.85	144.03	143.45	142.98	141.85
65.00°	140.70	139.89	140.13	140.76	140.30	137.84	136.04	135.44	134.40	135.31	136.81	139.60	141.70	142.95	142.34	141.60	140.70
67.50°	139.16	138.71	138.85	139.36	138.82	136.53	134.72	133.99	133.24	134.01	135.75	138.00	140.54	141.66	140.75	140.07	139.16
70.00°	137.50	136.83	137.44	137.82	137.40	135.16	133.54	132.33	131.88	132.59	134.23	136.31	139.30	140.01	139.15	138.37	137.50
72.50°	135.70	134.66	135.67	136.15	136.07	133.65	132.38	130.35	130.33	130.86	132.53	134.54	138.01	138.23	137.53	136.56	135.70
75.00°	133.71	132.93	133.80	134.41	134.24	132.02	130.26	128.36	128.65	129.10	130.63	132.81	135.93	136.33	135.80	134.50	133.71
77.50°	131.52	131.34	131.71	132.63	131.52	130.09	128.01	126.35	126.87	127.28	128.68	131.12	133.48	134.40	133.57	132.30	131.52
80.00°	129.30	129.32	129.51	130.19	128.95	127.97	126.37	124.47	124.85	125.39	126.60	128.96	130.82	132.00	131.27	130.10	129.30
82.50°	127.05	127.19	127.06	127.24	126.60	125.39	124.78	122.77	122.67	123.33	124.49	126.42	128.08	129.48	128.74	127.90	127.05
85.00°	124.60	124.59	124.50	124.23	124.10	122.67	121.96	120.66	120.52	121.15	121.69	123.60	125.00	126.54	126.07	125.31	124.60
87.50°	121.99	121.89	121.74	121.17	121.40	119.67	119.06	118.17	118.40	118.74	118.72	120.58	121.81	123.53	123.01	122.56	121.99
90.00°	119.33	118.99	118.84	118.11	118.30	116.62	116.24	115.64	115.92	116.14	115.92	117.30	118.56	120.21	119.92	119.74	119.33
92.50°	116.63	116.05	115.75	115.04	114.76	113.49	113.42	113.09	113.27	113.26	113.15	113.87	115.30	116.84	116.78	116.90	116.63
95.00°	113.57	112.97	112.24	110.98	110.50	109.75	110.29	110.30	110.44	110.23	110.21	109.77	111.09	112.38	113.40	113.82	113.57
97.50°	110.30	109.87	108.18	106.43	105.53	105.16	107.08	107.34	107.55	107.01	107.25	105.33	106.69	107.81	109.50	110.68	110.30
100.00°	106.60	105.99	103.71	100.91	99.79	100.09	102.42	103.97	104.32	103.58	102.51	100.12	100.73	102.06	105.15	106.81	106.60
102.50°	102.68	102.05	98.80	95.00	93.42	94.42	97.71	100.35	100.95	99.91	97.61	94.56	94.51	96.26	99.97	102.74	102.68
105.00°	98.53	97.70	93.34	88.21	86.19	88.00	92.41	96.41	97.03	96.04	92.33	87.98	86.71	89.18	94.32	98.21	98.53
107.50°	94.28	93.34	87.37	81.11	78.35	80.78	87.03	92.29	92.94	91.98	87.04	81.01	78.74	82.04	87.92	93.57	94.28
110.00°	89.81	88.58	81.06	72.73	69.71	73.12	81.02	87.91	88.94	87.53	80.79	72.73	69.74	73.05	81.46	88.80	89.81
112.50°	85.26	83.79	74.45	64.01	60.58	65.06	74.94	83.41	84.95	82.75	74.53	64.04	60.66	64.04	74.95	84.01	85.26

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	1,353	1,353	1,353	1,353	1,281	1,281	1,281	1,281	1,148	1,148	1,148	1,026	1,026	1,026	915	915	915	862
	1	1,170	1,087	1,014	947	1,099	1,025	959	899	909	856	808	803	761	722	704	672	641	626
	2	1,039	914	810	723	973	861	767	688	760	684	619	668	607	554	582	534	491	495
	3	934	783	667	574	872	737	632	547	651	564	493	571	500	441	496	440	391	406
	4	846	682	561	469	790	642	532	447	567	476	404	497	422	362	432	371	321	343
	5	772	600	481	392	720	566	456	374	501	409	338	440	363	303	383	320	269	295
	6	708	534	417	333	661	504	396	318	447	356	288	394	317	259	344	280	230	259
	7	653	479	366	287	611	453	349	274	403	314	249	356	280	224	312	248	200	230
	8	605	433	325	251	566	410	310	240	366	279	218	324	250	197	285	222	176	206
	9	563	394	291	221	528	374	277	211	334	251	193	297	226	174	262	201	156	186
	10	526	361	262	197	493	342	250	188	307	227	172	274	205	156	242	183	140	170

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	4.6 fc	-20.3 ft
6.5 ft	3.3 fc	-24.0 ft
7.5 ft	2.5 fc	-27.7 ft
8.0 ft	2.2 fc	-29.5 ft
10.0 ft	1.4 fc	-36.9 ft
12.0 ft	1.0 fc	-44.3 ft
14.0 ft	0.7 fc	-51.6 ft
16.0 ft	0.5 fc	-59.0 ft
20.0 ft	0.4 fc	-73.8 ft
24.0 ft	0.2 fc	-88.5 ft
28.0 ft	0.2 fc	-103.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1,919	1,919	1,919
45.00°	1,245	1,236	1,232
55.00°	1,225	1,222	1,223
65.00°	1,223	1,218	1,220
75.00°	1,231	1,232	1,236
85.00°	1,260	1,259	1,255

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