

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
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Spectrum Lighting Photometric Lab

Luminaire

GPRF3600GV 27L 35K EX MW
Nom 36" Globe (Sphere) luminaire

Test Number

SP-00647_7_M-27L

Test Date

1/27/2020

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

Summary of Results

Power

Input Watts	18 W
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Lumen Output

Output Lumens	2102
Efficacy	116.8 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

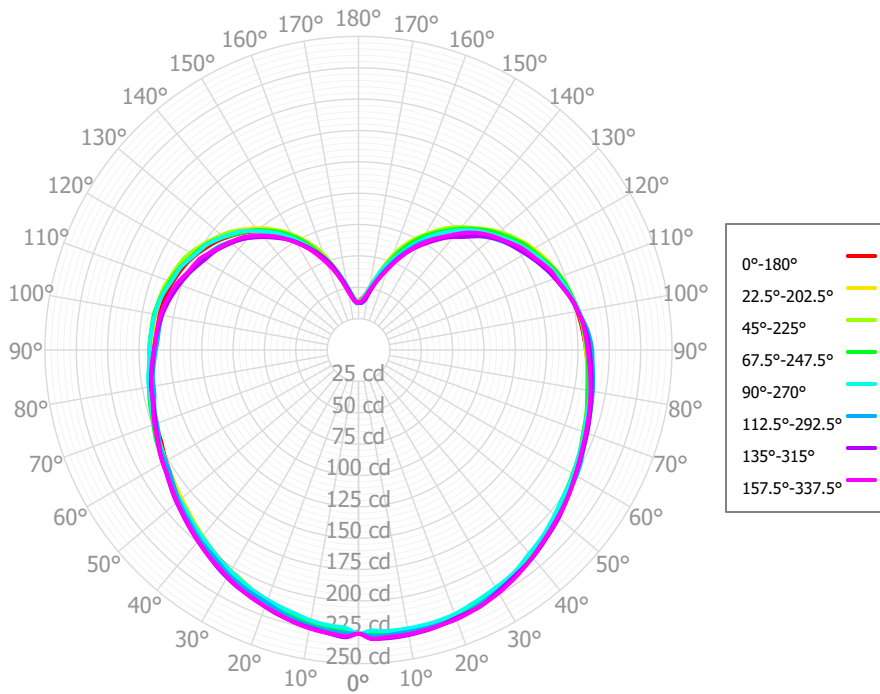
Full Beam Angle

0° - 180°	289°
90° - 270°	288°

IES File Header Contents

Keyword	Value
TEST	SP-00647_7_M-27L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	1/27/2020
ISSUEDATE	1/29/2020
LUMCAT	GPRF3600GV 27L 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°	21.86	1.04%	90.00° - 100.00°	187.85	8.93%
10.00° - 20.00°	63.05	3.00%	100.00° - 110.00°	176.71	8.40%
20.00° - 30.00°	100.38	4.77%	100.00° - 120.00°	334.23	15.90%
30.00° - 40.00°	131.48	6.25%	120.00° - 130.00°	132.19	6.29%
40.00° - 50.00°	155.43	7.39%	130.00° - 140.00°	102.38	4.87%
50.00° - 60.00°	172.62	8.21%	140.00° - 150.00°	71.09	3.38%
60.00° - 70.00°	184.01	8.75%	150.00° - 160.00°	41.75	1.99%
70.00° - 80.00°	190.28	9.05%	160.00° - 170.00°	17.98	0.86%
80.00° - 90.00°	191.62	9.11%	170.00° - 180.00°	4.22	0.20%
0.00° - 90.00°	1,210.74	57.59%	0.00° - 180.00°	2,102.44	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°	226.35	226.35	226.35	226.35	226.35	226.35	226.35	226.35	226.35	226.35	226.35	226.35	226.35	226.35	226.35	226.35	226.35
2.50°	226.98	225.67	225.65	226.40	223.98	225.98	229.29	228.48	223.41	224.18	224.66	224.70	222.02	227.99	230.51	230.44	226.98
5.00°	227.16	226.08	226.16	226.52	224.99	225.32	227.98	227.39	222.29	222.77	223.55	223.82	221.13	228.65	230.96	230.24	227.16
7.50°	227.36	226.43	226.70	226.46	225.33	224.30	226.23	226.61	221.19	221.16	222.44	222.98	220.36	228.30	231.03	230.16	227.36
10.00°	227.76	226.70	226.72	226.09	225.43	223.19	224.78	225.41	220.30	219.42	221.33	221.20	219.03	228.13	230.79	230.15	227.76
12.50°	227.98	226.61	226.65	225.90	225.39	221.31	223.48	223.89	219.27	217.64	219.82	219.22	217.03	228.22	230.33	229.79	227.98
15.00°	227.51	226.09	226.70	225.93	225.30	219.30	221.85	221.85	217.31	216.09	217.69	217.69	215.25	228.19	229.74	229.25	227.51
17.50°	226.99	225.76	226.75	225.82	224.76	216.80	220.10	219.54	215.22	214.57	215.60	216.23	213.66	228.01	228.67	228.88	226.99
20.00°	226.36	225.61	225.85	225.59	224.15	214.25	217.90	217.69	212.63	212.64	213.55	214.38	212.00	227.41	227.37	228.56	226.36
22.50°	225.49	224.98	224.90	224.67	222.74	212.53	215.59	216.03	210.26	210.67	211.47	212.50	210.28	226.43	226.85	227.59	225.49
25.00°	224.13	224.02	223.31	223.26	221.29	210.83	213.75	213.80	208.50	207.81	209.38	209.83	208.10	225.04	226.63	226.46	224.13
27.50°	222.95	222.87	221.78	221.67	220.00	208.87	211.99	211.42	206.42	205.02	207.31	207.25	205.68	223.37	224.80	225.11	222.95
30.00°	222.06	221.62	220.67	219.99	218.73	206.80	209.59	208.87	203.71	203.28	205.27	205.75	203.50	221.74	222.55	223.73	222.06
32.50°	220.63	219.89	219.44	218.38	217.77	203.89	207.14	206.30	201.16	201.43	202.64	204.13	201.41	220.12	220.67	221.92	220.63
35.00°	218.54	217.97	217.75	216.82	216.61	201.15	204.40	203.94	198.87	198.72	199.71	201.84	198.93	218.90	218.84	220.07	218.54
37.50°	216.54	216.26	215.96	214.78	214.13	199.16	201.66	201.61	196.63	196.04	197.51	199.49	196.33	217.82	217.45	217.92	216.54
40.00°	214.61	214.62	213.89	212.61	211.84	197.01	199.16	198.86	194.44	193.45	195.60	196.89	194.11	215.59	216.09	215.76	214.61
42.50°	212.63	212.77	211.85	210.71	210.32	194.31	196.65	196.09	192.20	190.88	193.38	194.30	191.96	213.08	214.06	213.53	212.63
45.00°	210.60	210.88	209.85	208.87	208.64	191.77	194.06	193.61	189.90	188.38	191.10	191.75	189.65	211.03	212.04	211.34	210.60
47.50°	208.86	208.75	207.89	206.73	206.52	189.57	191.53	191.13	187.67	186.04	189.22	189.31	187.33	209.04	210.24	209.42	208.86
50.00°	207.28	206.59	205.97	204.56	204.36	187.06	189.26	188.70	185.48	184.08	187.43	187.10	185.74	207.24	208.40	207.55	207.28
52.50°	205.37	204.51	203.99	202.52	202.11	184.04	186.89	186.28	183.15	182.23	185.17	185.10	184.15	205.46	206.17	205.84	205.37
55.00°	203.32	202.45	201.93	200.51	200.35	181.36	184.26	183.91	180.73	180.57	182.88	183.41	181.87	203.78	203.93	204.01	203.32
57.50°	200.90	200.59	200.08	198.90	199.33	179.12	181.92	181.74	178.85	178.97	180.63	181.55	179.65	202.12	201.70	201.87	200.90
60.00°	198.38	198.73	198.43	197.30	197.91	177.67	180.22	180.20	177.17	177.43	178.42	179.51	177.85	200.69	199.61	199.75	198.38
62.50°	196.72	196.80	196.68	195.85	195.99	177.02	178.32	178.51	175.37	176.07	177.04	178.08	176.20	199.17	197.95	197.68	196.72
65.00°	195.22	194.93	194.86	194.34	194.39	175.26	176.08	176.48	173.54	174.89	175.66	177.18	175.23	197.07	196.44	195.82	195.22
67.50°	193.55	193.28	192.90	192.56	193.07	172.65	174.01	174.65	172.62	173.25	174.19	175.78	174.26	195.11	195.23	194.26	193.55
70.00°	191.86	191.73	190.87	190.93	191.60	171.07	172.18	173.18	171.86	171.28	172.79	174.05	173.28	193.80	193.97	192.85	191.86
72.50°	190.67	190.47	189.42	189.80	190.04	170.12	170.57	171.58	170.70	170.11	171.69	172.89	172.24	192.56	192.63	191.61	190.67
75.00°	189.48	189.20	188.22	188.49	189.06	168.57	169.19	169.82	169.51	169.38	170.76	172.02	171.05	191.57	191.26	190.36	189.48
77.50°	187.97	187.89	186.97	186.76	188.41	166.75	168.40	168.54	168.52	168.73	170.31	170.82	170.18	190.61	189.86	189.11	187.97
80.00°	186.49	186.45	185.70	185.26	187.50	165.91	168.06	167.75	167.54	168.11	169.49	169.51	169.90	189.75	188.62	187.82	186.49
82.50°	185.24	184.81	185.37	184.19	186.49	165.37	166.87	166.82	166.53	167.21	167.86	168.27	169.16	188.79	187.53	186.51	185.24
85.00°	183.98	183.40	185.22	183.37	185.32	164.18	165.19	165.79	165.62	166.22	166.79	167.05	167.84	187.68	186.44	185.19	183.98
87.50°	182.64	182.30	183.37	182.92	184.12	162.85	164.08	164.48	165.50	165.34	166.66	166.87	167.07	186.84	185.33	183.88	182.64
90.00°	181.38	181.50	181.34	182.26	183.60	161.65	163.22	163.01	165.25	164.49	166.55	166.85	166.88	186.32	184.33	182.82	181.38
92.50°	180.36	180.99	180.69	181.38	183.19	160.47	162.24	162.23	164.44	164.29	166.47	166.43	166.50	185.10	183.38	181.87	180.36
95.00°	179.34	180.30	180.07	180.52	181.82	160.07	161.24	161.78	163.69	164.15	166.05	165.98	165.98	183.25	181.72	180.88	179.34
97.50°	178.31	179.47	179.14	179.67	180.34	159.70	160.19	161.07	163.14	164.17	165.31	165.81	165.42	180.69	179.75	179.87	178.31
100.00°	177.16	177.96	178.16	178.25	178.43	159.12	159.14	160.27	162.41	164.17	164.77	165.59	164.82	177.62	177.77	177.75	177.16
102.50°	175.79	176.05	176.76	176.45	176.49	158.47	157.59	159.07	161.29	163.61	164.38	164.43	163.89	175.24	175.79	175.45	175.79
105.00°	174.13	174.54	175.27	174.85	174.22	157.14	155.98	157.78	160.17	163.01	163.78	163.20	162.82	173.23	172.79	172.62	174.13
107.50°	172.05	173.21	173.35	173.34	171.92	155.64	154.03	156.06	159.05	161.99	163.05	161.53	161.06	170.39	169.59	169.74	172.05
110.00°	169.71	171.33	171.23	171.21	169.50	153.12	152.06	154.28	157.79	160.98	161.63	159.92	159.08	167.21	166.73	167.78	169.71
112.50°	167.10	169.29	168.43	168.87	167.01	150.74	149.92	151.73	156.36	159.98	159.92	158.51	157.66	163.90	163.90	165.76	167.10

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	2,291	2,291	2,291	2,291	2,134	2,134	2,134	2,134	1,841	1,841	1,841	1,573	1,573	1,573	1,326	1,326	1,326	1,211
	1	2,000	1,869	1,751	1,645	1,848	1,733	1,629	1,534	1,478	1,397	1,323	1,244	1,182	1,125	1,028	982	938	883
	2	1,788	1,585	1,418	1,278	1,646	1,468	1,319	1,193	1,248	1,131	1,031	1,044	954	875	856	788	727	703
	3	1,612	1,368	1,178	1,028	1,482	1,266	1,097	961	1,075	941	831	898	793	705	734	653	584	580
	4	1,464	1,195	998	848	1,345	1,107	930	793	941	799	687	786	674	584	643	555	483	493
	5	1,338	1,055	858	713	1,229	979	801	668	833	690	580	698	583	493	571	481	409	427
	6	1,228	940	747	609	1,129	873	698	571	745	603	496	626	511	423	514	423	351	375
	7	1,133	844	657	526	1,042	785	615	494	672	532	430	566	453	368	466	376	306	334
	8	1,049	763	583	460	966	710	546	432	610	474	377	516	405	324	427	337	270	301
	9	976	694	522	405	900	647	489	381	557	426	334	473	365	287	393	305	241	273
	10	911	635	470	361	841	593	442	340	512	386	298	436	331	257	364	278	217	250

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	7.5 fc	-7.9 ft
6.5 ft	5.4 fc	-9.3 ft
7.5 ft	4.0 fc	-10.8 ft
8.0 ft	3.5 fc	-11.5 ft
10.0 ft	2.3 fc	-14.4 ft
12.0 ft	1.6 fc	-17.2 ft
14.0 ft	1.2 fc	-20.1 ft
16.0 ft	0.9 fc	-23.0 ft
20.0 ft	0.6 fc	-28.7 ft
24.0 ft	0.4 fc	-34.4 ft
28.0 ft	0.3 fc	-40.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	345	345	345
45.00°	200	199	198
55.00°	192	190	189
65.00°	189	188	188
75.00°	194	193	193
85.00°	207	208	208

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