

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-37L

Test Date

1/27/2020

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

Summary of Results

Power

Input Watts	26 W
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Lumen Output

Output Lumens	3087
Efficacy	118.71 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

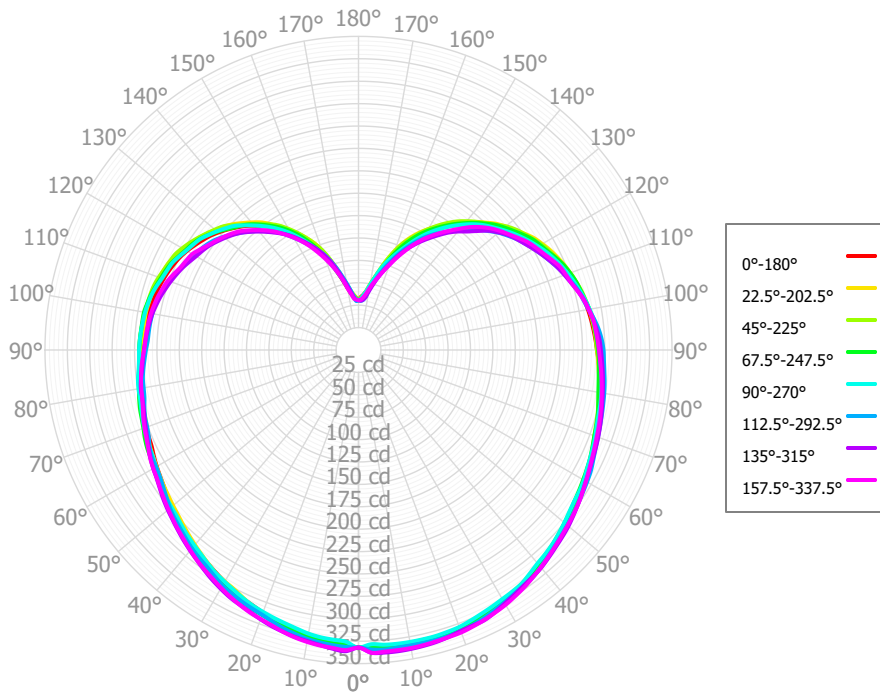
Full Beam Angle

0° - 180°	289°
90° - 270°	288°

IES File Header Contents

Keyword	Value
TEST	SP-00647_7_M-37L
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°	32.09	1.04%	90.00° - 100.00°	275.78	8.93%
10.00° - 20.00°	92.57	3.00%	100.00° - 110.00°	259.42	8.40%
20.00° - 30.00°	147.36	4.77%	100.00° - 120.00°	490.67	15.90%
30.00° - 40.00°	193.02	6.25%	120.00° - 130.00°	194.07	6.29%
40.00° - 50.00°	228.19	7.39%	130.00° - 140.00°	150.30	4.87%
50.00° - 60.00°	253.43	8.21%	140.00° - 150.00°	104.37	3.38%
60.00° - 70.00°	270.15	8.75%	150.00° - 160.00°	61.29	1.99%
70.00° - 80.00°	279.35	9.05%	160.00° - 170.00°	26.40	0.86%
80.00° - 90.00°	281.32	9.11%	170.00° - 180.00°	6.20	0.20%
0.00° - 90.00°	1,777.47	57.59%	0.00° - 180.00°	3,086.56	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°	332.30	332.30	332.30	332.30	332.30	332.30	332.30	332.30	332.30	332.30	332.30	332.30	332.30	332.30	332.30	332.30	332.30
2.50°	333.22	331.30	331.27	332.38	328.82	331.76	336.62	335.42	327.99	329.11	329.82	329.88	325.94	334.71	338.41	338.30	333.22
5.00°	333.49	331.90	332.02	332.55	330.30	330.79	334.69	333.82	326.34	327.05	328.19	328.59	324.63	335.68	339.07	338.01	333.49
7.50°	333.79	332.43	332.81	332.46	330.80	329.30	332.12	332.69	324.72	324.69	326.56	327.36	323.50	335.16	339.18	337.90	333.79
10.00°	334.37	332.81	332.84	331.92	330.95	327.66	329.99	330.92	323.42	322.13	324.94	324.75	321.55	334.91	338.81	337.88	334.37
12.50°	334.70	332.68	332.75	331.64	330.89	324.90	328.09	328.69	321.91	319.51	322.71	321.83	318.62	335.05	338.15	337.35	334.70
15.00°	334.00	331.92	332.81	331.68	330.77	321.95	325.70	325.70	319.03	317.24	319.58	319.59	316.01	335.00	337.28	336.56	334.00
17.50°	333.24	331.44	332.89	331.53	329.97	318.27	323.13	322.30	315.97	315.01	316.51	317.44	313.68	334.74	335.71	336.01	333.24
20.00°	332.31	331.21	331.56	331.18	329.07	314.53	319.90	319.58	312.15	312.17	313.51	314.73	311.23	333.85	333.80	335.54	332.31
22.50°	331.04	330.29	330.18	329.84	327.01	312.02	316.50	317.14	308.67	309.28	310.46	311.96	308.70	332.42	333.04	334.11	331.04
25.00°	329.04	328.89	327.84	327.76	324.87	309.51	313.80	313.88	306.09	305.08	307.38	308.05	305.51	330.38	332.71	332.47	329.04
27.50°	327.30	327.20	325.59	325.43	322.98	306.63	311.21	310.38	303.04	300.98	304.35	304.27	301.96	327.93	330.02	330.49	327.30
30.00°	326.00	325.36	323.96	322.96	321.12	303.60	307.70	306.64	299.06	298.44	301.35	302.06	298.76	325.53	326.72	328.46	326.00
32.50°	323.91	322.81	322.16	320.61	319.71	299.33	304.10	302.86	295.33	295.71	297.49	299.68	295.69	323.15	323.96	325.79	323.91
35.00°	320.84	320.00	319.67	318.31	318.00	295.30	300.07	299.41	291.96	291.74	293.19	296.32	292.04	321.36	321.28	323.09	320.84
37.50°	317.89	317.50	317.05	315.32	314.36	292.39	296.06	295.98	288.67	287.80	289.96	292.87	288.22	319.77	319.23	319.92	317.89
40.00°	315.07	315.08	314.01	312.13	311.00	289.23	292.38	291.94	285.46	284.00	287.15	289.05	284.97	316.51	317.24	316.75	315.07
42.50°	312.16	312.36	311.01	309.34	308.76	285.27	288.69	287.88	282.16	280.23	283.90	285.24	281.81	312.82	314.26	313.47	312.16
45.00°	309.17	309.59	308.08	306.64	306.30	281.53	284.90	284.24	278.80	276.55	280.55	281.50	278.42	309.80	311.29	310.26	309.17
47.50°	306.62	306.46	305.19	303.50	303.19	278.30	281.18	280.60	275.52	273.13	277.80	277.93	275.01	306.88	308.66	307.45	306.62
50.00°	304.31	303.29	302.38	300.31	300.02	274.63	277.84	277.03	272.31	270.24	275.16	274.68	272.69	304.25	305.95	304.70	304.31
52.50°	301.50	300.24	299.48	297.32	296.72	270.19	274.38	273.47	268.87	267.53	271.85	271.74	270.34	301.63	302.67	302.19	301.50
55.00°	298.49	297.21	296.45	294.36	294.13	266.25	270.50	270.00	265.33	265.10	268.48	269.25	267.00	299.17	299.39	299.51	298.49
57.50°	294.94	294.49	293.73	292.00	292.63	262.96	267.07	266.81	262.57	262.74	265.17	266.53	263.74	296.72	296.12	296.36	294.94
60.00°	291.24	291.76	291.31	289.65	290.54	260.83	264.59	264.55	260.10	260.48	261.93	263.53	261.10	294.63	293.05	293.25	291.24
62.50°	288.80	288.93	288.74	287.52	287.74	259.88	261.80	262.07	257.46	258.49	259.91	261.44	258.67	292.40	290.61	290.22	288.80
65.00°	286.60	286.17	286.07	285.31	285.38	257.29	258.49	259.09	254.76	256.75	257.88	260.12	257.25	289.31	288.39	287.48	286.60
67.50°	284.15	283.75	283.20	282.70	283.44	253.46	255.46	256.40	253.42	254.34	255.73	258.06	255.83	286.44	286.61	285.20	284.15
70.00°	281.67	281.47	280.21	280.30	281.29	251.15	252.77	254.24	252.31	251.46	253.67	255.52	254.40	284.51	284.77	283.13	281.67
72.50°	279.92	279.63	278.09	278.64	278.99	249.75	250.42	251.90	250.61	249.74	252.06	253.82	252.87	282.70	282.80	281.30	279.92
75.00°	278.17	277.76	276.32	276.73	277.56	247.47	248.38	249.31	248.85	248.66	250.68	252.54	251.11	281.24	280.79	279.47	278.17
77.50°	275.96	275.84	274.48	274.18	276.60	244.80	247.23	247.43	247.41	247.70	250.02	250.78	249.84	279.84	278.73	277.63	275.96
80.00°	273.78	273.73	272.62	271.98	275.26	243.56	246.73	246.27	245.97	246.80	248.83	248.85	249.42	278.56	276.91	275.73	273.78
82.50°	271.95	271.31	272.14	270.40	273.78	242.78	244.98	244.91	244.48	245.47	246.43	247.03	248.35	277.15	275.31	273.81	271.95
85.00°	270.09	269.24	271.92	269.21	272.07	241.04	242.52	243.39	243.15	244.02	244.87	245.25	246.40	275.53	273.70	271.88	270.09
87.50°	268.14	267.63	269.21	268.54	270.31	239.08	240.89	241.47	242.96	242.74	244.67	244.98	245.28	274.29	272.09	269.95	268.14
90.00°	266.29	266.45	266.23	267.57	269.53	237.32	239.62	239.31	242.60	241.49	244.51	244.95	244.99	273.53	270.62	268.40	266.29
92.50°	264.79	265.71	265.27	266.28	268.94	235.58	238.19	238.17	241.41	241.19	244.39	244.34	244.44	271.75	269.22	267.01	264.79
95.00°	263.29	264.70	264.36	265.01	266.92	234.99	236.71	237.51	240.31	240.98	243.78	243.68	243.68	269.03	266.78	265.54	263.29
97.50°	261.77	263.48	262.99	263.77	264.76	234.45	235.18	236.46	239.50	241.01	242.68	243.43	242.84	265.27	263.88	264.06	261.77
100.00°	260.08	261.25	261.55	261.68	261.95	233.60	233.63	235.29	238.43	241.01	241.89	243.10	241.96	260.76	260.98	260.96	260.08
102.50°	258.08	258.46	259.50	259.05	259.11	232.65	231.35	233.53	236.79	240.20	241.33	241.39	240.60	257.26	258.08	257.58	258.08
105.00°	255.63	256.25	257.31	256.70	255.76	230.70	229.00	231.63	235.15	239.31	240.44	239.59	239.03	254.32	253.67	253.42	255.63
107.50°	252.59	254.29	254.50	254.47	252.40	228.49	226.13	229.11	233.49	237.82	239.37	237.15	236.45	250.15	248.97	249.19	252.59
110.00°	249.16	251.53	251.39	251.35	248.85	224.80	223.24	226.50	231.65	236.33	237.29	234.78	233.54	245.48	244.77	246.32	249.16
112.50°	245.32	248.53	247.27	247.92	245.18	221.31	220.09	222.75	229.55	234.87	234.78	232.71	231.46	240.62	240.63	243.34	245.32

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%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	3,363	3,363	3,363	3,363	3,132	3,132	3,132	3,132	2,702	2,702	2,702	2,309	2,309	2,309	1,947	1,947	1,947
	1	2,936	2,744	2,571	2,415	2,713	2,544	2,391	2,252	2,170	2,051	1,942	1,827	1,736	1,651	1,510	1,442	1,378
	2	2,624	2,327	2,082	1,876	2,416	2,155	1,937	1,752	1,832	1,661	1,513	1,533	1,401	1,285	1,257	1,157	1,067
	3	2,367	2,008	1,730	1,509	2,175	1,859	1,611	1,411	1,578	1,382	1,220	1,319	1,165	1,036	1,078	959	858
	4	2,150	1,755	1,465	1,245	1,974	1,625	1,366	1,165	1,381	1,173	1,009	1,154	990	857	943	815	710
	5	1,964	1,550	1,260	1,047	1,804	1,437	1,176	981	1,223	1,012	851	1,024	856	724	839	706	600
	6	1,803	1,380	1,097	893	1,657	1,281	1,025	838	1,094	885	729	918	750	621	754	621	516
	7	1,663	1,239	965	772	1,530	1,152	902	725	986	781	632	831	664	540	685	552	450
	8	1,540	1,120	856	675	1,418	1,043	802	634	895	696	554	757	594	475	627	495	397
	9	1,432	1,019	766	595	1,321	950	718	560	818	626	490	694	536	422	577	448	354
	10	1,337	932	690	529	1,235	871	648	499	752	566	438	640	486	378	534	409	318

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	11.0 fc	-7.9 ft
6.5 ft	7.9 fc	-9.3 ft
7.5 ft	5.9 fc	-10.8 ft
8.0 ft	5.2 fc	-11.5 ft
10.0 ft	3.3 fc	-14.4 ft
12.0 ft	2.3 fc	-17.2 ft
14.0 ft	1.7 fc	-20.1 ft
16.0 ft	1.3 fc	-23.0 ft
20.0 ft	0.8 fc	-28.7 ft
24.0 ft	0.6 fc	-34.4 ft
28.0 ft	0.4 fc	-40.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	506	506	506
45.00°	293	292	290
55.00°	281	279	277
65.00°	277	276	276
75.00°	285	283	284
85.00°	303	305	306

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