

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

GPRF2000GV 37L 35K EX MW
Nom 20" Globe (Sphere) luminaire

Test Number

SP-00647_5_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	3424
Efficacy	131.71 lm/W

Luminous Dimensions

0° - 180° Size	-1.67
90° - 270° Size	-1.67
Height	1.67

Spacing Criterion

Two luminaires, plane 0°	1.53
Two luminaires, plane 90°	1.47
Four luminaires	1.72

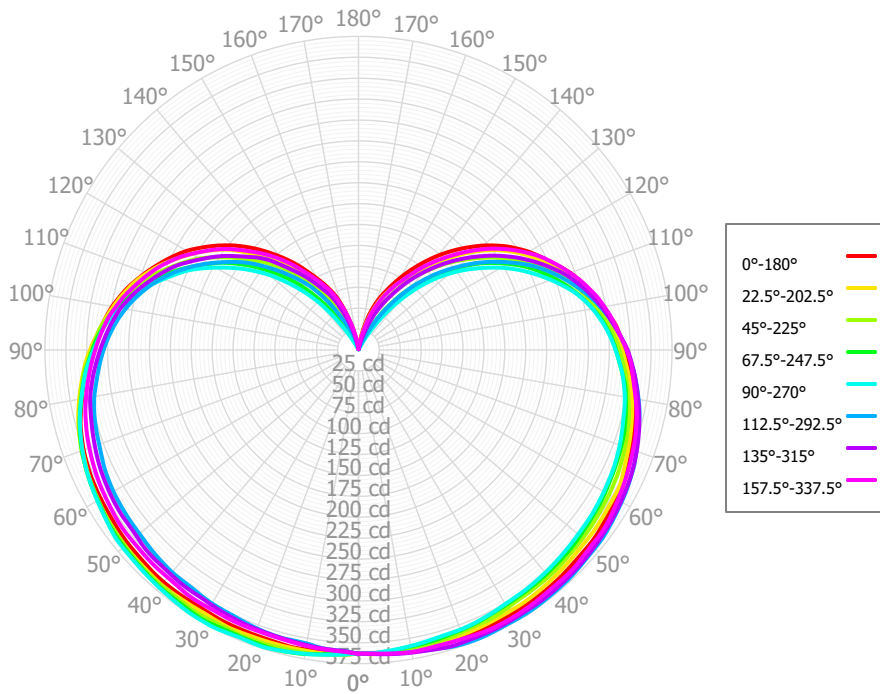
Full Beam Angle

0° - 180°	263°
90° - 270°	244°

IES File Header Contents

Keyword	Value
TEST	SP-00647_5_M-37L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	1/27/2020
ISSUEDATE	1/29/2020
LUMCAT	GPRF2000GV 37L 35K EX MW
LUMINAIRE	Nom 20" 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°	35.24	1.03%	90.00° - 100.00°	332.39	9.71%
10.00° - 20.00°	103.12	3.01%	100.00° - 110.00°	292.83	8.55%
20.00° - 30.00°	168.07	4.91%	100.00° - 120.00°	530.82	15.50%
30.00° - 40.00°	227.14	6.63%	120.00° - 130.00°	174.76	5.10%
40.00° - 50.00°	278.15	8.12%	130.00° - 140.00°	111.54	3.26%
50.00° - 60.00°	318.85	9.31%	140.00° - 150.00°	57.62	1.68%
60.00° - 70.00°	346.65	10.12%	150.00° - 160.00°	22.17	0.65%
70.00° - 80.00°	358.78	10.48%	160.00° - 170.00°	4.92	0.14%
80.00° - 90.00°	353.96	10.34%	170.00° - 180.00°	0.25	0.01%
0.00° - 90.00°	2,189.95	63.95%	0.00° - 180.00°	3,424.41	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°	363.15	363.15	363.15	363.15	363.15	363.15	363.15	363.15	363.15	363.15	363.15	363.15	363.15	363.15	363.15	363.15	363.15
2.50°	363.42	364.27	363.09	363.43	363.11	360.58	360.77	361.53	363.68	365.45	364.33	363.45	364.70	363.32	364.01	363.42	363.42
5.00°	363.79	363.59	362.51	363.12	361.91	360.42	360.08	360.82	363.22	365.49	365.70	364.94	365.97	364.78	365.27	364.60	363.79
7.50°	364.18	363.42	361.95	361.31	360.71	358.85	359.37	360.17	362.92	365.36	366.98	366.98	367.51	365.71	366.52	365.78	364.18
10.00°	364.84	363.20	361.86	360.14	359.50	356.50	358.37	359.48	363.68	365.18	367.58	369.27	368.95	366.68	367.50	366.90	364.84
12.50°	365.45	362.88	361.76	359.74	358.24	356.06	357.42	358.50	364.17	365.23	368.13	370.64	370.34	367.69	368.54	366.54	365.45
15.00°	365.29	362.69	361.42	358.92	356.91	356.45	356.66	357.65	363.40	365.33	368.46	371.69	371.68	369.57	370.09	366.25	365.29
17.50°	365.15	362.70	360.94	357.70	356.16	355.67	355.96	357.25	362.78	365.46	368.79	371.55	372.99	372.16	371.39	366.70	365.15
20.00°	365.16	362.58	359.53	356.72	355.96	354.49	355.49	357.00	362.66	365.59	369.07	371.11	372.72	373.50	371.28	367.25	365.16
22.50°	365.19	362.30	358.36	355.95	355.14	353.01	354.93	357.17	362.60	366.03	369.11	370.93	372.10	374.02	371.25	368.37	365.19
25.00°	365.25	361.91	358.35	354.74	353.87	351.46	354.07	357.13	362.66	366.50	368.46	370.81	373.06	373.85	371.55	369.31	365.25
27.50°	365.31	361.42	357.94	353.24	352.46	350.74	353.09	356.62	362.45	365.75	368.21	371.57	374.25	373.32	371.67	369.41	365.31
30.00°	365.35	361.15	356.21	352.27	350.96	350.18	351.79	356.51	361.70	364.99	368.85	372.45	374.14	373.44	371.21	369.37	365.35
32.50°	365.26	361.06	354.86	351.57	350.07	348.83	350.97	357.09	361.44	365.24	368.90	371.61	373.92	373.83	370.93	368.81	365.26
35.00°	364.81	360.56	354.48	351.00	349.48	347.38	351.07	356.95	362.02	365.52	367.91	370.68	372.90	373.50	371.08	368.18	364.81
37.50°	364.37	359.80	354.11	350.49	348.61	347.11	350.78	355.72	362.39	366.13	367.38	370.30	371.85	372.94	371.01	367.40	364.37
40.00°	363.94	358.92	353.77	349.74	347.64	346.93	349.90	355.07	362.50	366.57	367.53	369.91	370.93	372.41	370.51	366.89	363.94
42.50°	363.28	357.99	353.11	348.92	346.50	345.84	349.37	355.14	362.09	365.90	367.28	368.92	370.01	371.88	369.94	366.92	363.28
45.00°	362.21	356.96	351.90	348.12	345.31	344.72	349.32	354.86	361.10	365.27	366.58	367.94	369.10	370.78	369.24	366.37	362.21
47.50°	361.50	355.88	350.90	347.32	344.18	343.33	348.37	354.24	360.43	364.88	365.61	367.19	368.25	369.56	368.42	364.85	361.50
50.00°	361.31	355.39	350.17	346.00	343.07	341.99	346.48	353.93	360.07	364.37	364.39	366.42	367.86	369.04	367.42	363.91	361.31
52.50°	360.41	355.07	349.27	344.58	342.20	341.25	345.48	353.87	359.17	363.46	363.35	365.48	367.15	368.59	366.42	363.71	360.41
55.00°	358.70	354.21	348.19	343.46	341.37	340.49	345.26	352.92	357.87	362.48	362.46	364.29	364.81	366.88	365.41	362.58	358.70
57.50°	357.42	353.23	347.10	342.38	340.15	339.57	344.41	351.38	356.82	361.33	361.06	362.04	362.57	365.10	364.12	360.47	357.42
60.00°	356.57	352.66	346.02	340.77	338.90	338.54	343.12	349.98	355.93	360.02	359.33	359.98	360.71	363.41	362.61	358.37	356.57
62.50°	355.02	352.17	344.74	339.13	337.60	336.98	341.65	348.64	354.83	358.38	357.76	358.53	358.79	361.70	360.93	356.30	355.02
65.00°	352.92	349.26	343.31	337.70	336.29	335.16	340.09	346.79	353.64	356.36	356.28	356.83	356.71	359.50	359.15	354.14	352.92
67.50°	350.49	346.10	341.39	336.28	334.47	332.51	337.97	344.73	351.85	353.70	354.47	354.45	354.35	357.16	356.81	351.93	350.49
70.00°	347.85	343.52	339.18	334.72	332.61	330.11	335.60	342.55	349.84	351.37	352.52	351.84	351.37	353.37	354.17	349.59	347.85
72.50°	344.55	340.96	336.86	333.05	330.19	328.35	333.19	340.33	347.12	349.47	349.45	348.77	348.26	349.75	351.03	347.17	344.55
75.00°	340.90	338.15	334.49	330.35	327.81	326.37	330.76	337.54	344.19	346.77	346.02	345.22	344.94	347.18	347.68	344.11	340.90
77.50°	337.57	335.32	331.29	327.63	325.74	323.94	328.33	334.60	340.16	343.16	342.00	340.90	341.13	344.31	343.78	340.73	337.57
80.00°	334.39	331.97	327.76	324.87	323.48	320.88	325.90	330.97	335.87	339.24	337.84	336.69	336.65	340.15	339.70	336.77	334.39
82.50°	330.85	328.50	324.11	321.70	320.20	316.80	322.08	327.20	332.40	335.05	334.02	332.62	332.31	335.86	335.54	332.59	330.85
85.00°	327.19	323.97	320.42	316.73	316.66	312.86	317.99	323.21	329.04	330.80	330.27	328.16	328.12	331.20	331.36	329.12	327.19
87.50°	322.05	319.53	316.35	311.99	312.13	309.10	313.56	319.19	324.59	326.52	324.71	323.28	322.94	326.31	326.68	325.86	322.05
90.00°	316.54	315.59	312.20	308.00	307.50	304.93	309.10	314.96	320.03	321.25	318.97	318.29	316.78	320.87	321.90	320.63	316.54
92.50°	313.22	311.38	307.34	303.62	302.61	300.32	304.37	310.72	314.74	315.36	314.37	313.21	311.30	315.09	315.33	314.96	313.22
95.00°	310.27	306.15	302.37	298.26	297.29	295.16	299.63	306.06	309.43	309.67	309.82	306.66	306.35	308.63	308.54	309.69	310.27
97.50°	303.82	300.54	296.25	292.17	291.01	289.53	294.28	301.34	304.38	304.08	302.42	299.04	298.64	301.72	302.05	304.47	303.82
100.00°	297.00	293.78	290.02	284.61	284.16	283.04	288.85	295.02	299.25	298.02	295.01	291.21	289.13	294.07	295.58	298.52	297.00
102.50°	290.78	286.98	282.49	276.73	276.28	275.91	281.54	288.61	292.80	291.76	287.25	283.26	279.91	285.64	288.11	292.51	290.78
105.00°	284.59	280.05	274.88	268.35	267.18	268.01	274.16	281.30	286.20	284.89	279.39	273.77	270.83	276.21	280.58	285.18	284.59
107.50°	277.14	272.90	266.46	259.42	256.29	259.64	265.78	273.97	278.46	277.83	270.67	263.55	259.84	266.50	272.19	277.79	277.14
110.00°	269.60	265.32	257.92	249.78	245.09	250.31	257.36	266.48	270.65	269.30	261.64	253.13	248.07	256.49	263.63	269.42	269.60
112.50°	260.56	257.08	247.72	239.93	233.50	240.52	248.59	258.74	262.50	260.43	250.92	242.64	236.57	245.95	253.22	261.02	260.56

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%	10%
	0	3,783	3,783	3,783	3,783	3,551	3,551	3,551	3,551	3,119	3,119	3,119	2,724	2,724	2,724	2,361	2,361	2,361
	1	3,282	3,057	2,855	2,673	3,056	2,856	2,676	2,512	2,479	2,337	2,207	2,134	2,023	1,920	1,815	1,730	1,650
	2	2,923	2,578	2,293	2,054	2,711	2,405	2,150	1,933	2,079	1,876	1,700	1,779	1,619	1,478	1,502	1,377	1,266
	3	2,630	2,215	1,894	1,639	2,434	2,066	1,777	1,544	1,784	1,551	1,359	1,523	1,337	1,181	1,281	1,134	1,009
	4	2,385	1,931	1,598	1,344	2,206	1,801	1,500	1,267	1,556	1,311	1,117	1,329	1,131	971	1,117	959	829
	5	2,177	1,702	1,370	1,125	2,013	1,589	1,288	1,062	1,375	1,128	938	1,176	974	816	991	828	697
	6	1,997	1,515	1,190	958	1,848	1,416	1,120	905	1,228	983	800	1,053	851	697	889	725	596
	7	1,842	1,359	1,046	826	1,706	1,272	985	781	1,107	867	692	952	753	604	806	643	518
	8	1,706	1,228	927	721	1,582	1,151	874	682	1,004	772	605	867	672	530	737	576	456
	9	1,586	1,117	829	635	1,473	1,048	783	601	918	693	535	794	605	470	678	521	405
	10	1,481	1,022	747	564	1,377	961	706	535	843	627	477	733	549	420	628	474	363

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	12.0 fc	-12.4 ft
6.5 ft	8.6 fc	-14.7 ft
7.5 ft	6.5 fc	-16.9 ft
8.0 ft	5.7 fc	-18.1 ft
10.0 ft	3.6 fc	-22.6 ft
12.0 ft	2.5 fc	-27.1 ft
14.0 ft	1.9 fc	-31.6 ft
16.0 ft	1.4 fc	-36.1 ft
20.0 ft	0.9 fc	-45.2 ft
24.0 ft	0.6 fc	-54.2 ft
28.0 ft	0.5 fc	-63.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	1,785	1,785	1,785
45.00°	1,107	1,076	1,056
55.00°	1,090	1,058	1,038
65.00°	1,100	1,070	1,048
75.00°	1,125	1,104	1,082
85.00°	1,186	1,162	1,148

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