

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

994 Jefferson Street  
Fall River, MA 02721  
+1.508.678.2303

## Spectrum Lighting Photometric Lab

### Luminaire

GPRF2400GV 37L 35K EX MW  
Nom 24" Globe (Sphere) luminaire

### Test Number

SP-00647\_6\_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
-------------	------

#### Lumen Output

Output Lumens	3223
Efficacy	123.95 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

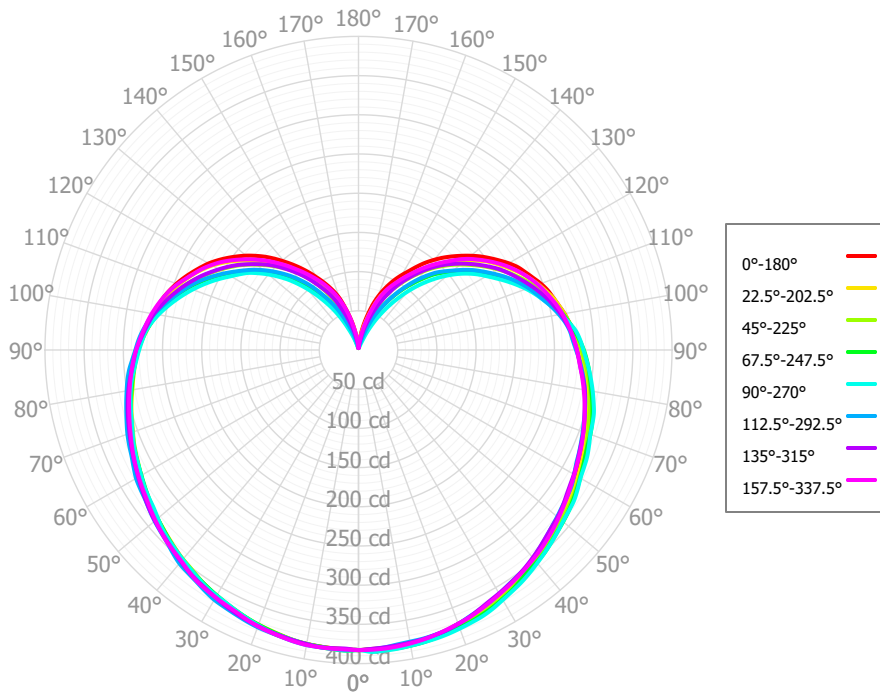
#### Full Beam Angle

0° - 180°	257°
90° - 270°	238°

### IES File Header Contents

Keyword	Value
TEST	SP-00647_6_M-37L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	1/27/2020
ISSUEDATE	1/29/2020
LUMCAT	GPRF2400GV 37L 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°	37.03	1.15%	90.00° - 100.00°	298.68	9.27%
10.00° - 20.00°	107.01	3.32%	100.00° - 110.00°	265.88	8.25%
20.00° - 30.00°	170.53	5.29%	100.00° - 120.00°	486.25	15.09%
30.00° - 40.00°	223.94	6.95%	120.00° - 130.00°	168.37	5.22%
40.00° - 50.00°	265.49	8.24%	130.00° - 140.00°	115.38	3.58%
50.00° - 60.00°	295.12	9.16%	140.00° - 150.00°	67.03	2.08%
60.00° - 70.00°	312.99	9.71%	150.00° - 160.00°	30.29	0.94%
70.00° - 80.00°	320.01	9.93%	160.00° - 170.00°	8.24	0.26%
80.00° - 90.00°	315.50	9.79%	170.00° - 180.00°	0.81	0.03%
0.00° - 90.00°	2,047.61	63.54%	0.00° - 180.00°	3,222.66	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°	382.88	382.88	382.88	382.88	382.88	382.88	382.88	382.88	382.88	382.88	382.88	382.88	382.88	382.88	382.88	382.88	382.88
2.50°	381.83	382.78	382.76	383.43	385.57	382.97	381.37	382.49	382.14	382.36	383.21	383.91	383.75	382.28	381.72	382.81	381.83
5.00°	381.83	382.39	383.13	383.50	385.09	382.65	381.85	382.56	381.99	382.07	383.09	382.55	382.96	380.95	380.88	382.44	381.83
7.50°	381.29	381.96	382.92	383.76	384.36	382.42	382.16	382.44	381.53	381.68	382.23	381.47	382.33	378.97	380.03	381.49	381.29
10.00°	380.33	381.11	382.39	383.04	383.20	382.27	380.89	382.19	380.91	380.66	380.97	380.92	381.05	377.90	379.14	380.21	380.33
12.50°	378.91	380.20	380.91	382.10	382.15	381.03	379.60	380.92	380.17	379.39	379.32	379.72	379.56	377.43	378.17	378.67	378.91
15.00°	377.21	378.60	379.01	380.29	381.25	379.06	378.13	379.07	378.77	377.08	377.59	377.49	378.04	376.30	376.54	376.57	377.21
17.50°	374.75	376.89	377.08	378.33	379.95	377.61	376.61	377.17	376.97	374.88	375.82	375.24	376.52	374.81	374.73	374.13	374.75
20.00°	371.93	374.29	375.13	376.76	378.20	376.43	374.84	375.26	374.34	373.01	373.47	372.96	373.74	371.95	371.95	371.72	371.93
22.50°	369.96	371.65	373.45	375.23	376.45	374.43	372.92	372.31	371.33	370.86	370.72	370.37	370.78	368.47	368.94	369.32	369.96
25.00°	368.33	368.78	371.85	372.82	374.72	372.08	370.50	368.97	368.25	367.99	368.18	367.45	367.57	365.61	365.04	366.24	368.33
27.50°	365.18	365.86	368.89	370.37	371.86	370.00	367.86	366.68	365.16	365.10	365.76	364.51	364.34	362.98	361.40	362.87	365.18
30.00°	361.57	362.68	365.68	367.14	368.19	368.02	364.65	364.69	362.29	362.16	362.55	361.54	361.92	359.38	358.54	359.80	361.57
32.50°	358.77	359.66	362.36	363.86	365.00	364.60	361.67	362.35	359.49	358.98	358.99	358.62	359.52	355.53	355.66	356.82	358.77
35.00°	356.16	357.08	359.02	359.68	362.10	360.83	359.15	359.94	356.63	355.43	355.17	355.74	355.86	352.83	352.75	353.80	356.16
37.50°	352.97	353.97	354.99	355.71	358.61	358.09	356.15	355.90	353.77	351.92	351.26	352.57	352.22	350.35	349.56	350.77	352.97
40.00°	349.69	349.63	350.91	353.53	354.84	355.54	352.39	351.64	349.56	348.47	348.52	349.23	348.82	346.43	345.87	347.66	349.69
42.50°	345.71	345.69	348.38	351.11	351.28	350.94	348.76	348.75	345.16	344.90	346.08	345.58	345.44	342.34	342.01	344.53	345.71
45.00°	341.66	342.51	345.82	347.38	347.80	346.11	345.28	345.95	342.67	341.18	342.11	341.78	342.26	338.29	337.91	340.92	341.66
47.50°	338.33	339.35	341.98	343.81	344.19	342.79	342.07	342.11	340.33	337.81	337.87	338.12	338.83	334.24	334.42	337.26	338.33
50.00°	335.02	336.23	338.24	340.87	340.55	339.56	339.13	338.25	336.36	334.74	334.71	334.50	334.09	330.96	331.67	333.25	335.02
52.50°	331.05	333.13	335.50	337.76	337.94	335.95	335.73	334.28	332.34	331.44	331.69	330.83	329.76	327.71	328.11	329.23	331.05
55.00°	327.14	330.05	332.66	334.12	335.55	332.40	331.91	330.36	328.50	327.97	327.95	327.13	326.99	325.16	323.77	325.36	327.14
57.50°	324.18	326.76	329.14	330.40	331.40	330.12	328.13	327.10	324.70	324.29	324.17	323.50	323.98	322.41	320.22	321.51	324.18
60.00°	321.15	323.26	325.72	326.51	327.00	327.66	324.39	323.82	321.54	320.49	320.26	319.88	320.24	317.75	317.33	318.01	321.15
62.50°	317.56	319.92	322.71	322.78	324.38	323.53	320.88	320.45	318.33	317.20	316.39	316.86	316.75	313.31	314.14	314.57	317.56
65.00°	313.94	316.69	319.48	319.34	321.93	319.58	317.51	317.01	314.65	314.14	313.21	313.91	313.84	310.36	310.75	311.64	313.94
67.50°	310.22	313.24	315.52	316.57	318.37	316.74	314.18	313.28	311.01	310.28	310.03	311.10	310.60	307.41	307.93	308.65	310.22
70.00°	306.61	309.62	311.75	314.80	314.82	313.76	310.88	309.62	307.54	306.11	306.77	308.31	306.73	304.45	305.42	305.33	306.61
72.50°	303.40	306.15	308.44	312.35	312.93	310.16	307.79	306.22	304.18	302.86	303.53	304.62	303.33	301.60	302.27	302.01	303.40
75.00°	300.21	302.77	305.42	309.06	310.93	306.67	304.79	302.90	301.18	299.86	300.41	300.93	300.60	299.09	298.84	298.69	300.21
77.50°	297.08	299.50	302.99	305.49	307.21	303.51	301.51	299.80	298.26	296.51	297.21	297.54	297.87	296.40	295.93	295.32	297.08
80.00°	293.94	296.29	300.11	301.64	303.45	300.39	298.14	296.69	295.56	293.09	293.64	294.18	295.12	293.28	293.20	291.79	293.94
82.50°	290.80	293.16	296.47	298.23	299.43	297.40	294.30	293.56	292.41	290.09	290.31	290.98	291.63	289.93	289.16	288.26	290.80
85.00°	287.29	290.05	292.63	295.21	295.37	293.81	290.36	290.43	288.25	287.17	287.72	287.78	287.40	286.11	284.80	284.71	287.29
87.50°	283.15	286.26	288.51	291.57	291.13	289.01	286.97	287.28	284.30	284.39	284.76	284.57	283.51	282.04	281.66	281.42	283.15
90.00°	279.57	282.28	284.68	287.51	286.99	284.68	283.65	283.77	280.74	281.62	280.89	281.19	279.90	277.56	278.75	278.62	279.57
92.50°	276.81	278.82	281.16	282.52	283.26	281.10	279.12	279.74	277.52	278.14	276.68	276.98	276.20	273.78	275.44	275.53	276.81
95.00°	273.92	275.44	276.62	277.02	278.46	276.68	274.49	275.81	274.79	274.64	271.81	272.45	272.43	270.91	272.08	272.01	273.92
97.50°	270.87	271.14	271.16	270.89	270.68	271.17	269.86	271.98	271.21	270.41	267.13	266.77	266.41	266.33	267.20	268.29	270.87
100.00°	266.86	266.73	265.62	264.47	262.51	264.47	265.19	267.73	266.62	266.10	262.76	260.63	259.17	259.87	262.22	264.30	266.86
102.50°	261.89	261.91	260.02	257.27	253.50	256.51	258.57	263.08	262.15	260.80	257.49	253.22	251.13	252.81	256.29	259.71	261.89
105.00°	257.35	257.06	253.41	249.81	244.79	248.66	251.93	257.94	257.78	255.47	251.06	246.00	242.73	245.20	250.29	254.49	257.35
107.50°	253.16	250.74	246.22	241.07	236.61	240.91	244.81	252.41	252.72	249.95	244.49	239.15	234.07	237.94	243.28	249.16	253.16
110.00°	247.54	244.38	238.69	231.99	227.74	232.78	237.65	245.68	247.12	244.24	237.79	231.52	225.33	230.92	236.23	243.73	247.54
112.50°	240.96	237.40	231.00	222.86	217.90	224.37	230.05	238.20	240.90	237.59	230.07	222.52	216.23	222.98	228.77	237.51	240.96

### 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	3,557	3,557	3,557	3,557	3,337	3,337	3,337	3,337	2,928	2,928	2,928	2,553	2,553	2,553	2,209	2,209	2,209
	1	3,097	2,890	2,704	2,537	2,883	2,700	2,535	2,385	2,344	2,214	2,094	2,017	1,915	1,822	1,715	1,638	1,565
	2	2,764	2,446	2,183	1,962	2,564	2,282	2,047	1,847	1,974	1,787	1,625	1,690	1,543	1,414	1,427	1,314	1,212
	3	2,491	2,107	1,810	1,573	2,306	1,965	1,698	1,483	1,698	1,484	1,307	1,452	1,281	1,137	1,223	1,089	974
	4	2,261	1,840	1,531	1,295	2,092	1,717	1,438	1,222	1,485	1,259	1,079	1,270	1,088	940	1,070	925	805
	5	2,065	1,624	1,316	1,088	1,911	1,517	1,237	1,028	1,315	1,085	909	1,127	940	794	951	801	680
	6	1,896	1,447	1,145	929	1,756	1,353	1,078	878	1,176	948	779	1,010	824	681	855	704	585
	7	1,749	1,299	1,008	803	1,621	1,217	950	760	1,061	838	675	914	730	592	777	625	510
	8	1,621	1,175	895	702	1,504	1,102	845	665	964	747	593	833	653	521	711	562	450
	9	1,508	1,070	801	620	1,401	1,005	757	588	881	672	525	764	589	463	654	508	401
	10	1,408	980	723	552	1,310	921	684	524	810	608	469	705	535	415	606	464	361

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	12.7 fc	-13.9 ft
6.5 ft	9.1 fc	-16.4 ft
7.5 ft	6.8 fc	-18.9 ft
8.0 ft	6.0 fc	-20.2 ft
10.0 ft	3.8 fc	-25.2 ft
12.0 ft	2.7 fc	-30.3 ft
14.0 ft	2.0 fc	-35.3 ft
16.0 ft	1.5 fc	-40.4 ft
20.0 ft	1.0 fc	-50.5 ft
24.0 ft	0.7 fc	-60.5 ft
28.0 ft	0.5 fc	-70.6 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	1,312	1,312	1,312
<b>45.00°</b>	728	737	741
<b>55.00°</b>	693	705	711
<b>65.00°</b>	682	694	700
<b>75.00°</b>	691	703	716
<b>85.00°</b>	726	740	747

### 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