

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SB1016GV 27L 35K XX TF1 MWI MW
Nom 16" diam x 10" H Subway Series /Boylston luminaire

Test Number

SP-01062

Test Date

3/2/2020

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	2144
Efficacy	119.12 lm/W

Luminous Dimensions

0° - 180° Size	-1.33
90° - 270° Size	-1.33
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.26
Two luminaires, plane 90°	1.26
Four luminaires	1.39

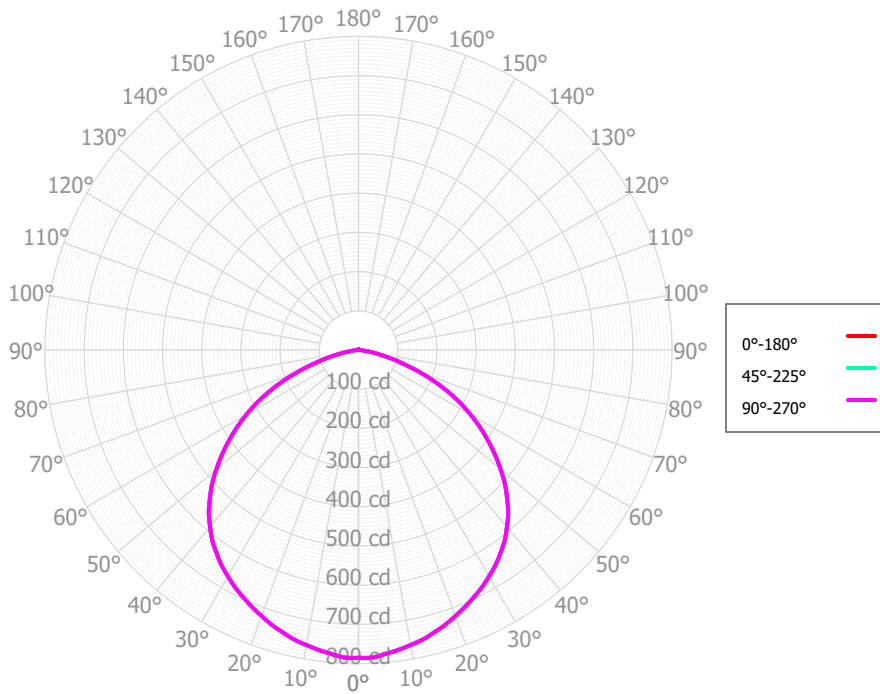
Full Beam Angle

0° - 180°	112°
90° - 270°	112°

IES File Header Contents

Keyword	Value
TEST	SP-01062
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	3/2/2020
ISSUEDATE	3/3/2020
LUMCAT	SB1016GV 27L 35K XX TF1 MWI MW
LUMINAIRE	Nom 16" diam x 10" H Subway Series /Boylston luminaire
OTHER	Beam Angle: 111.4 degrees
LAMPCAT	N/A
LAMP	27L/35K
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
_CRI	80+
_CCTMULT	27K x 0.97, 30K x 0.99, 40K x 1.03
_LAMPMULT	15L x 0.573

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	76.96	3.59%	90.00° - 100.00°	1.46	0.07%
10.00° - 20.00°	210.54	9.81%	100.00° - 110.00°	1.32	0.06%
20.00° - 30.00°	321.05	14.96%	100.00° - 120.00°	2.54	0.12%
30.00° - 40.00°	395.09	18.41%	120.00° - 130.00°	1.06	0.05%
40.00° - 50.00°	412.75	19.23%	130.00° - 140.00°	1.03	0.05%
50.00° - 60.00°	360.18	16.78%	140.00° - 150.00°	0.80	0.04%
60.00° - 70.00°	247.83	11.55%	150.00° - 160.00°	0.57	0.03%
70.00° - 80.00°	99.88	4.65%	160.00° - 170.00°	0.37	0.02%
80.00° - 90.00°	13.84	0.64%	170.00° - 180.00°	0.13	0.01%
0.00° - 90.00°	2,138.13	99.63%	0.00° - 180.00°	2,146.10	100.00%

Candela Distribution

	0.00°	45.00°	90.00°
0.00°	785.63	785.63	785.63
2.50°	785.63	785.63	785.63
5.00°	778.90	778.90	778.90
7.50°	772.18	772.18	772.18
10.00°	764.55	764.55	764.55
12.50°	756.90	756.90	756.90
15.00°	746.15	746.15	746.15
17.50°	735.38	735.38	735.38
20.00°	722.56	722.56	722.56
22.50°	709.74	709.74	709.74
25.00°	696.13	696.13	696.13
27.50°	682.46	682.46	682.46
30.00°	666.68	666.68	666.68
32.50°	650.79	650.79	650.79
35.00°	631.89	631.89	631.89
37.50°	612.85	612.85	612.85
40.00°	589.23	589.23	589.23
42.50°	565.41	565.41	565.41
45.00°	536.33	536.33	536.33
47.50°	507.03	507.03	507.03
50.00°	473.19	473.19	473.19
52.50°	439.27	439.27	439.27
55.00°	403.66	403.66	403.66
57.50°	367.96	367.96	367.96
60.00°	330.61	330.61	330.61
62.50°	293.03	293.03	293.03
65.00°	251.68	251.68	251.68
67.50°	210.23	210.23	210.23
70.00°	167.37	167.37	167.37
72.50°	125.17	125.17	125.17
75.00°	92.19	92.19	92.19
77.50°	60.01	60.01	60.01
80.00°	37.97	37.97	37.97
82.50°	17.04	17.04	17.04
85.00°	10.11	10.11	10.11
87.50°	3.64	3.64	3.64
90.00°	2.35	2.35	2.35
92.50°	1.17	1.17	1.17
95.00°	1.18	1.18	1.18
97.50°	1.19	1.19	1.19
100.00°	1.23	1.23	1.23
102.50°	1.26	1.26	1.26
105.00°	1.26	1.26	1.26
107.50°	1.25	1.25	1.25
110.00°	1.25	1.25	1.25
112.50°	1.24	1.24	1.24

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%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	2,553	2,553	2,553	2,553	2,493	2,493	2,493	2,493	2,380	2,380	2,380	2,277	2,277	2,277	2,183	2,183	2,138
	1	2,351	2,256	2,172	2,095	2,293	2,207	2,130	2,061	2,115	2,052	1,994	2,031	1,980	1,932	1,953	1,912	1,871
	2	2,146	1,978	1,840	1,723	2,090	1,937	1,810	1,702	1,861	1,754	1,661	1,790	1,701	1,623	1,724	1,651	1,585
	3	1,960	1,742	1,574	1,440	1,907	1,708	1,552	1,427	1,644	1,510	1,400	1,584	1,471	1,375	1,529	1,433	1,351
	4	1,796	1,546	1,363	1,223	1,747	1,517	1,346	1,214	1,463	1,314	1,197	1,412	1,284	1,180	1,365	1,255	1,163
	5	1,652	1,382	1,193	1,054	1,607	1,358	1,180	1,048	1,311	1,155	1,036	1,269	1,132	1,024	1,228	1,109	1,012
	6	1,525	1,244	1,056	920	1,484	1,224	1,045	916	1,184	1,026	907	1,148	1,007	899	1,113	988	890
	7	1,414	1,128	943	813	1,377	1,110	934	809	1,077	918	803	1,045	903	796	1,016	888	790
	8	1,316	1,029	848	724	1,282	1,014	842	722	985	829	717	958	816	712	932	804	707
	9	1,229	944	769	651	1,199	931	764	649	906	753	646	882	742	642	860	732	638
	10	1,152	871	702	590	1,124	859	698	589	838	689	586	817	680	583	798	671	580

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	26.0 fc	16.2 ft
6.5 ft	18.6 fc	19.1 ft
7.5 ft	14.0 fc	22.0 ft
8.0 ft	12.3 fc	23.5 ft
10.0 ft	7.9 fc	29.4 ft
12.0 ft	5.5 fc	35.3 ft
14.0 ft	4.0 fc	41.1 ft
16.0 ft	3.1 fc	47.0 ft
20.0 ft	2.0 fc	58.8 ft
24.0 ft	1.4 fc	70.5 ft
28.0 ft	1.0 fc	82.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	6,060	6,060	6,060
45.00°	5,850	5,850	5,850
55.00°	5,428	5,428	5,428
65.00°	4,593	4,593	4,593
75.00°	2,747	2,747	2,747
85.00°	895	895	895

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	17.3	18.9	17.6	19.2	19.5	17.3	18.9	17.6	19.2	19.5
	3H	18.6	20.1	19.0	20.4	20.8	18.6	20.1	19.0	20.4	20.8
	4H	18.9	20.3	19.3	20.6	21.0	18.9	20.3	19.3	20.6	21.0
	6H	19.1	20.3	19.5	20.7	21.1	19.1	20.3	19.5	20.7	21.1
	8H	19.1	20.2	19.5	20.6	21.0	19.1	20.2	19.5	20.6	21.0
	12H	19.0	20.2	19.5	20.6	21.0	19.0	20.2	19.5	20.6	21.0
4H	2H	17.8	19.1	18.2	19.5	19.9	17.8	19.1	18.2	19.5	19.9
	3H	19.3	20.4	19.7	20.8	21.2	19.3	20.4	19.7	20.8	21.2
	4H	19.7	20.7	20.1	21.1	21.6	19.7	20.7	20.1	21.1	21.6
	6H	19.9	20.7	20.3	21.2	21.7	19.9	20.7	20.3	21.2	21.7
	8H	19.9	20.7	20.3	21.1	21.6	19.9	20.7	20.3	21.1	21.6
	12H	19.9	20.6	20.4	21.1	21.6	19.9	20.6	20.4	21.1	21.6
8H	4H	19.8	20.6	20.3	21.1	21.6	19.8	20.6	20.3	21.1	21.6
	6H	20.0	20.7	20.5	21.2	21.7	20.0	20.7	20.5	21.2	21.7
	8H	20.0	20.6	20.5	21.1	21.6	20.0	20.6	20.5	21.1	21.6
	12H	20.0	20.6	20.6	21.1	21.6	20.0	20.6	20.6	21.1	21.6
12H	4H	19.8	20.5	20.3	21.0	21.5	19.8	20.5	20.3	21.0	21.5
	6H	20.0	20.6	20.5	21.1	21.6	20.0	20.6	20.5	21.1	21.6
	8H	20.0	20.6	20.5	21.1	21.6	20.0	20.6	20.5	21.1	21.6

Corrected UGR values based on total output lumens

SHR = 1.0