Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

ME0713UDGV 15LGL 15LTF1 35K EX MWI

Nom 7" diam x 13" H, Direct/Indirect Mini Espresso

Test Number

SP-00718_6

Test Date

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

Summary of Results

Power

Input Watts	20 W

Lumen Output

Output Lumens	1893
Efficacy	94.65 lm/W

Luminous Dimensions

0° - 180° Size	-0.62
90° - 270° Size	-0.62
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.19
Two luminaires, plane 90°	1.18
Four luminaires	1.09

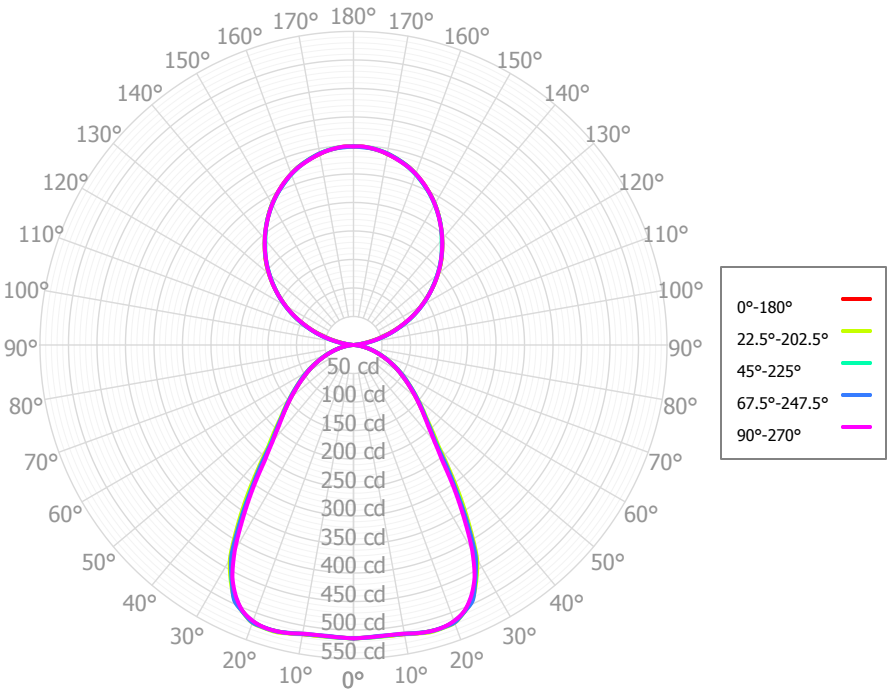
Full Beam Angle

0° - 180°	288°
90° - 270°	288°

IES File Header Contents

Keyword	Value
TEST	SP-00718_6
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	5/6/2019
UPDATE	5/28/2019
LUMCAT	ME0713UDGV 15LGL 15LTF1 35K EX MWI
LUMINAIRE	Nom 7" diam x 13" H, Direct/Indirect Mini Espresso
LAMPCAT	N/A
LAMP	Direct and Indirect source: 15L GV board
OTHER	Uplight: 85 degree beam angle
OTHER	Uplight: Flush clear glass lens
OTHER	Downlight: 76 degree beam angle
OTHER	Downlight: regressed 3 inch domed diffuser
OTHER	CCT Output Multipliers: 27K x 0.97, 30K x 0.98, 40K x 1.03, 50K x 1.06
OTHER	Total luminaire watts is approximate
OTHER	This report prepared by Spectrum Lighting

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	51.49	2.72%	90.00° - 100.00°	7.48	0.39%
10.00° - 20.00°	147.02	7.75%	100.00° - 110.00°	53.98	2.85%
20.00° - 30.00°	222.28	11.72%	100.00° - 120.00°	162.23	8.56%
30.00° - 40.00°	198.87	10.49%	120.00° - 130.00°	148.09	7.81%
40.00° - 50.00°	139.17	7.34%	130.00° - 140.00°	168.03	8.86%
50.00° - 60.00°	104.87	5.53%	140.00° - 150.00°	165.25	8.72%
60.00° - 70.00°	70.23	3.70%	150.00° - 160.00°	139.57	7.36%
70.00° - 80.00°	35.25	1.86%	160.00° - 170.00°	93.42	4.93%
80.00° - 90.00°	8.01	0.42%	170.00° - 180.00°	34.55	1.82%
0.00° - 90.00°	977.19	51.54%	0.00° - 180.00°	1,895.80	100.00%

Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	514.59	514.59	514.59	514.59	514.59
2.50°	513.81	514.22	514.13	513.59	513.73
5.00°	513.06	513.95	513.70	512.41	513.11
7.50°	513.79	514.36	513.07	513.21	512.91
10.00°	515.15	514.85	514.34	514.79	514.17
12.50°	517.96	518.36	517.92	517.35	517.92
15.00°	519.83	521.58	519.88	520.21	519.98
17.50°	519.98	520.77	520.26	519.58	519.74
20.00°	516.25	518.71	515.71	518.17	515.34
22.50°	506.77	507.44	507.16	507.20	506.22
25.00°	489.72	493.55	488.71	494.78	487.53
27.50°	463.64	466.36	463.78	462.82	459.99
30.00°	424.91	433.54	421.93	429.05	416.64
32.50°	373.61	380.37	371.25	372.88	361.48
35.00°	320.74	327.70	317.46	316.17	308.09
37.50°	266.62	276.33	262.36	268.84	255.79
40.00°	228.12	232.40	226.80	223.09	220.97
42.50°	199.75	204.69	197.57	199.64	194.75
45.00°	177.73	180.73	177.67	177.06	175.20
47.50°	159.09	163.24	159.98	161.01	158.19
50.00°	143.23	146.78	144.30	145.29	142.86
52.50°	128.53	131.74	128.98	131.17	128.02
55.00°	115.34	118.23	115.69	117.60	115.01
57.50°	102.63	106.48	102.62	105.99	102.39
60.00°	91.28	94.81	91.64	94.17	91.55
62.50°	80.27	83.21	80.75	81.80	80.98
65.00°	69.83	71.90	70.58	70.32	70.12
67.50°	59.47	60.79	60.39	60.61	59.29
70.00°	50.16	51.35	50.06	51.03	49.58
72.50°	41.20	42.59	40.67	41.56	40.35
75.00°	33.19	33.58	32.81	33.23	32.15
77.50°	24.92	25.57	25.20	25.37	24.36
80.00°	17.31	18.52	17.87	17.96	17.16
82.50°	11.34	11.57	11.41	11.19	10.84
85.00°	6.69	6.64	6.39	5.97	5.77
87.50°	2.57	2.67	2.42	2.90	2.53
90.00°	0.75	0.33	0.79	0.26	0.61
92.50°	0.69	0.86	0.49	0.90	0.74
95.00°	2.07	2.82	3.27	2.71	3.19
97.50°	8.56	11.70	12.44	12.81	11.99
100.00°	19.52	22.79	25.04	25.53	24.36
102.50°	32.26	36.20	37.28	39.31	36.83
105.00°	47.55	50.29	51.83	53.17	50.15
107.50°	62.61	64.62	66.19	66.92	65.32
110.00°	77.74	79.41	80.38	81.20	79.51
112.50°	93.69	94.32	95.55	95.59	93.48

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	2,038	2,038	2,038	2,038	1,884	1,884	1,884	1,884	1,596	1,596	1,596	1,333	1,333	1,333	1,091	1,091	1,091	977
	1	1,878	1,803	1,736	1,675	1,735	1,672	1,614	1,562	1,426	1,385	1,347	1,200	1,172	1,146	992	973	956	875
	2	1,726	1,597	1,490	1,401	1,594	1,484	1,392	1,314	1,272	1,205	1,147	1,077	1,029	987	896	863	834	778
	3	1,587	1,421	1,293	1,191	1,466	1,324	1,212	1,122	1,140	1,056	988	970	909	858	812	770	734	696
	4	1,463	1,272	1,133	1,026	1,352	1,187	1,065	970	1,027	934	861	879	810	754	740	691	650	627
RCR	5	1,352	1,145	1,001	895	1,250	1,071	944	848	931	832	757	800	726	668	678	624	581	568
	6	1,252	1,036	892	788	1,159	971	843	749	847	747	672	732	655	597	624	567	523	518
	7	1,163	943	800	700	1,078	885	757	667	775	675	601	673	595	537	576	518	474	475
	8	1,084	862	722	626	1,006	811	685	598	713	613	542	621	543	487	535	476	432	438
	9	1,013	792	656	565	941	746	624	540	658	560	491	576	499	443	498	439	396	405
	10	950	731	599	512	884	689	571	491	610	514	448	536	460	406	465	407	364	376

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	17.0 fc	0.0 ft
6.5 ft	12.2 fc	0.0 ft
7.5 ft	9.1 fc	0.0 ft
8.0 ft	8.0 fc	0.0 ft
10.0 ft	5.1 fc	0.0 ft
12.0 ft	3.6 fc	0.0 ft
14.0 ft	2.6 fc	0.0 ft
16.0 ft	2.0 fc	0.0 ft
20.0 ft	1.3 fc	0.0 ft
24.0 ft	0.9 fc	0.0 ft
28.0 ft	0.7 fc	0.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	18,347	18,347	18,347
45.00°	8,961	8,958	8,834
55.00°	7,169	7,191	7,149
65.00°	5,891	5,954	5,916
75.00°	4,572	4,520	4,429
85.00°	2,736	2,615	2,361

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	13.1	13.9	14.0	14.8	16.1	13.0	13.8	14.0	14.8	16.1
	3H	14.4	15.1	15.4	16.1	17.4	14.4	15.1	15.3	16.1	17.3
	4H	14.9	15.5	15.8	16.5	17.8	14.8	15.5	15.8	16.5	17.7
	6H	15.1	15.7	16.1	16.7	18.0	15.1	15.7	16.0	16.7	18.0
	8H	15.2	15.8	16.2	16.7	18.0	15.1	15.7	16.1	16.7	18.0
	12H	15.2	15.7	16.2	16.7	18.0	15.1	15.7	16.1	16.7	18.0
4H	2H	13.5	14.1	14.5	15.1	16.4	13.4	14.1	14.4	15.1	16.4
	3H	15.0	15.6	16.0	16.6	17.9	15.0	15.5	16.0	16.5	17.8
	4H	15.6	16.1	16.6	17.1	18.4	15.5	16.0	16.5	17.0	18.4
	6H	15.9	16.4	17.0	17.4	18.7	15.9	16.3	16.9	17.3	18.7
	8H	16.0	16.4	17.0	17.4	18.8	16.0	16.4	17.0	17.4	18.7
	12H	16.1	16.4	17.1	17.5	18.8	16.0	16.3	17.0	17.4	18.7
8H	4H	15.7	16.1	16.7	17.1	18.5	15.7	16.1	16.7	17.1	18.4
	6H	16.2	16.5	17.2	17.6	18.9	16.1	16.5	17.2	17.5	18.9
	8H	16.3	16.6	17.4	17.7	19.0	16.3	16.6	17.3	17.6	19.0
	12H	16.4	16.7	17.5	17.7	19.1	16.3	16.6	17.4	17.6	19.0
12H	4H	15.7	16.1	16.7	17.1	18.4	15.7	16.0	16.7	17.1	18.4
	6H	16.2	16.5	17.2	17.5	18.9	16.1	16.4	17.2	17.5	18.8
	8H	16.4	16.6	17.4	17.7	19.0	16.3	16.6	17.3	17.6	19.0

Corrected UGR values based on total output lumens

SHR = 1.0