

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : SGE4SQLEDOS-10L35KEX-CA0244OS-SGSO.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] 102560753CRT-017\_M-10L  
[TESTLAB] Intertek  
[ISSUE DATE] 11/14/2016  
[UPDATE] 1/4/2017  
[LAB-REF LUMCAT] CRT1611041146-006B\_M-10L  
[MANUFAC] Spectrum Lighting  
[LUMCAT] SGE4SQLEDOS-10L-35K-E1-CA0244OS-SG-SO  
[LUMINAIRE] 4" Square, LED recessed downlight  
[TRIM] Cast Alum, Semi-Diffuse finish, regressed Solite lens  
[OTHER] 69.5 Degree Beam Angle  
[LAMP] N/A  
[LAMPCAT] N/A  
[OTHER] Total Luminaire Watts is approximate  
[OTHER] Photometric measurements taken at 120VAC  
[OTHER] CCT Output Multipliers: 40K x 1.0, 30K x 1.0, 27K x 0.946  
[OTHER] This report updated by Spectrum Lighting, scaled from 30L

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	713
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	68
Total Luminaire Watts	10.46
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.14
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.31 ft
Luminous Width (90-270)	0.31 ft
Luminous Height	0.00 ft

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**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	17572	20890	18272
55	10985	9856	11694
65	4625	4018	5151
75	1540	1585	1807
85	968	2638	1320

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0.0	443.435	443.435	443.435	443.435	443.435	443.435	443.435	443.435	443.435	443.435
2.5	444.325	445.182	444.223	445.216	445.387	445.216	444.223	445.182	444.325	445.182
5.0	448.196	447.374	448.127	448.846	448.264	448.846	448.127	447.374	448.196	447.374
7.5	453.778	453.504	454.874	453.950	453.778	453.950	454.874	453.504	453.778	453.504
10.0	458.779	459.395	461.656	460.217	459.395	460.217	461.656	459.395	458.779	459.395
12.5	461.896	463.814	468.677	466.006	463.163	466.006	468.677	463.814	461.896	463.814
15.0	462.786	467.341	474.363	471.383	464.088	471.383	474.363	467.341	462.786	467.341
17.5	456.313	464.807	478.610	470.801	457.683	470.801	478.610	464.807	456.313	464.807
20.0	442.887	456.450	477.205	465.115	445.250	465.115	477.205	456.450	442.887	456.450
22.5	423.262	442.305	469.362	453.436	426.687	453.436	469.362	442.305	423.262	442.305
25.0	397.780	421.926	451.826	433.400	401.616	433.400	451.826	421.926	397.780	421.926
27.5	365.893	392.711	425.522	406.548	369.558	406.548	425.522	392.711	365.893	392.711
30.0	325.786	356.303	391.854	371.578	331.917	371.578	391.854	356.303	325.786	356.303
32.5	282.871	315.374	351.371	331.369	289.789	331.369	351.371	315.374	282.871	315.374
35.0	239.887	271.294	306.572	286.947	246.497	286.947	306.572	271.294	239.887	271.294
37.5	198.787	226.735	258.793	241.497	204.507	241.497	258.793	226.735	198.787	226.735
40.0	162.414	185.635	212.008	198.308	167.346	198.308	212.008	185.635	162.414	185.635
42.5	133.096	150.152	168.887	159.639	137.548	159.639	168.887	150.152	133.096	150.152
45.0	111.039	121.930	132.000	128.129	115.457	128.129	132.000	121.930	111.039	121.930
47.5	94.633	100.113	102.682	103.846	98.709	103.846	102.682	100.113	94.633	100.113
50.0	81.618	83.330	80.556	85.283	85.111	85.283	80.556	83.330	81.618	83.330
52.5	69.117	69.322	63.842	70.555	72.610	70.555	63.842	69.322	69.117	69.322
55.0	56.307	56.136	50.519	57.026	59.938	57.026	50.519	56.136	56.307	56.136
57.5	44.183	43.806	39.251	44.662	47.779	44.662	39.251	43.806	44.183	43.806
60.0	33.462	32.777	29.695	33.668	36.511	33.668	29.695	32.777	33.462	32.777
62.5	24.420	23.496	21.680	24.249	26.818	24.249	21.680	23.496	24.420	23.496
65.0	17.468	16.132	15.173	16.714	19.454	16.714	15.173	16.132	17.468	16.132
67.5	12.673	11.200	10.309	11.371	14.317	11.371	10.309	11.200	12.673	11.200
70.0	7.775	7.056	7.056	7.638	9.042	7.638	7.056	7.056	7.775	7.056
72.5	4.966	4.727	4.898	5.035	5.891	5.035	4.898	4.727	4.966	4.727
75.0	3.562	3.562	3.665	3.699	4.179	3.699	3.665	3.562	3.562	3.562
77.5	2.980	3.083	2.946	3.117	3.288	3.117	2.946	3.083	2.980	3.083
80.0	2.363	2.500	2.398	2.740	2.672	2.740	2.398	2.500	2.363	2.500
82.5	1.199	1.781	2.226	2.329	1.747	2.329	2.226	1.781	1.199	1.781
85.0	0.754	1.302	2.055	1.918	1.028	1.918	2.055	1.302	0.754	1.302
87.5	0.582	0.993	1.507	1.370	0.719	1.370	1.507	0.993	0.582	0.993
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Vert. Angles      Horizontal Angles

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	443.435	443.435	443.435	443.435	443.435	443.435	443.435
2.5	444.223	445.216	445.387	445.216	444.223	445.182	444.325
5.0	448.127	448.846	448.264	448.846	448.127	447.374	448.196
7.5	454.874	453.950	453.778	453.950	454.874	453.504	453.778
10.0	461.656	460.217	459.395	460.217	461.656	459.395	458.779
12.5	468.677	466.006	463.163	466.006	468.677	463.814	461.896
15.0	474.363	471.383	464.088	471.383	474.363	467.341	462.786
17.5	478.610	470.801	457.683	470.801	478.610	464.807	456.313
20.0	477.205	465.115	445.250	465.115	477.205	456.450	442.887
22.5	469.362	453.436	426.687	453.436	469.362	442.305	423.262
25.0	451.826	433.400	401.616	433.400	451.826	421.926	397.780
27.5	425.522	406.548	369.558	406.548	425.522	392.711	365.893
30.0	391.854	371.578	331.917	371.578	391.854	356.303	325.786

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**CANDELA TABULATION - (Cont.)**

<b>32.5</b>	351.371	331.369	289.789	331.369	351.371	315.374	282.871
<b>35.0</b>	306.572	286.947	246.497	286.947	306.572	271.294	239.887
<b>37.5</b>	258.793	241.497	204.507	241.497	258.793	226.735	198.787
<b>40.0</b>	212.008	198.308	167.346	198.308	212.008	185.635	162.414
<b>42.5</b>	168.887	159.639	137.548	159.639	168.887	150.152	133.096
<b>45.0</b>	132.000	128.129	115.457	128.129	132.000	121.930	111.039
<b>47.5</b>	102.682	103.846	98.709	103.846	102.682	100.113	94.633
<b>50.0</b>	80.556	85.283	85.111	85.283	80.556	83.330	81.618
<b>52.5</b>	63.842	70.555	72.610	70.555	63.842	69.322	69.117
<b>55.0</b>	50.519	57.026	59.938	57.026	50.519	56.136	56.307
<b>57.5</b>	39.251	44.662	47.779	44.662	39.251	43.806	44.183
<b>60.0</b>	29.695	33.668	36.511	33.668	29.695	32.777	33.462
<b>62.5</b>	21.680	24.249	26.818	24.249	21.680	23.496	24.420
<b>65.0</b>	15.173	16.714	19.454	16.714	15.173	16.132	17.468
<b>67.5</b>	10.309	11.371	14.317	11.371	10.309	11.200	12.673
<b>70.0</b>	7.056	7.638	9.042	7.638	7.056	7.056	7.775
<b>72.5</b>	4.898	5.035	5.891	5.035	4.898	4.727	4.966
<b>75.0</b>	3.665	3.699	4.179	3.699	3.665	3.562	3.562
<b>77.5</b>	2.946	3.117	3.288	3.117	2.946	3.083	2.980
<b>80.0</b>	2.398	2.740	2.672	2.740	2.398	2.500	2.363
<b>82.5</b>	2.226	2.329	1.747	2.329	2.226	1.781	1.199
<b>85.0</b>	2.055	1.918	1.028	1.918	2.055	1.302	0.754
<b>87.5</b>	1.507	1.370	0.719	1.370	1.507	0.993	0.582
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	175.22	N.A.	24.60
0-30	368.72	N.A.	51.70
0-40	540.36	N.A.	75.80
0-60	689.05	N.A.	96.70
0-80	711.22	N.A.	99.80
0-90	712.83	N.A.	100.00
10-90	669.64	N.A.	93.90
20-40	365.14	N.A.	51.20
20-50	463.69	N.A.	65.00
40-70	166.43	N.A.	23.30
60-80	22.18	N.A.	3.10
70-80	4.43	N.A.	0.60
80-90	1.60	N.A.	0.20
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	712.83	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	43.18
10-20	132.03
20-30	193.51
30-40	171.64
40-50	98.55
50-60	50.14
60-70	17.74
70-80	4.43
80-90	1.60
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

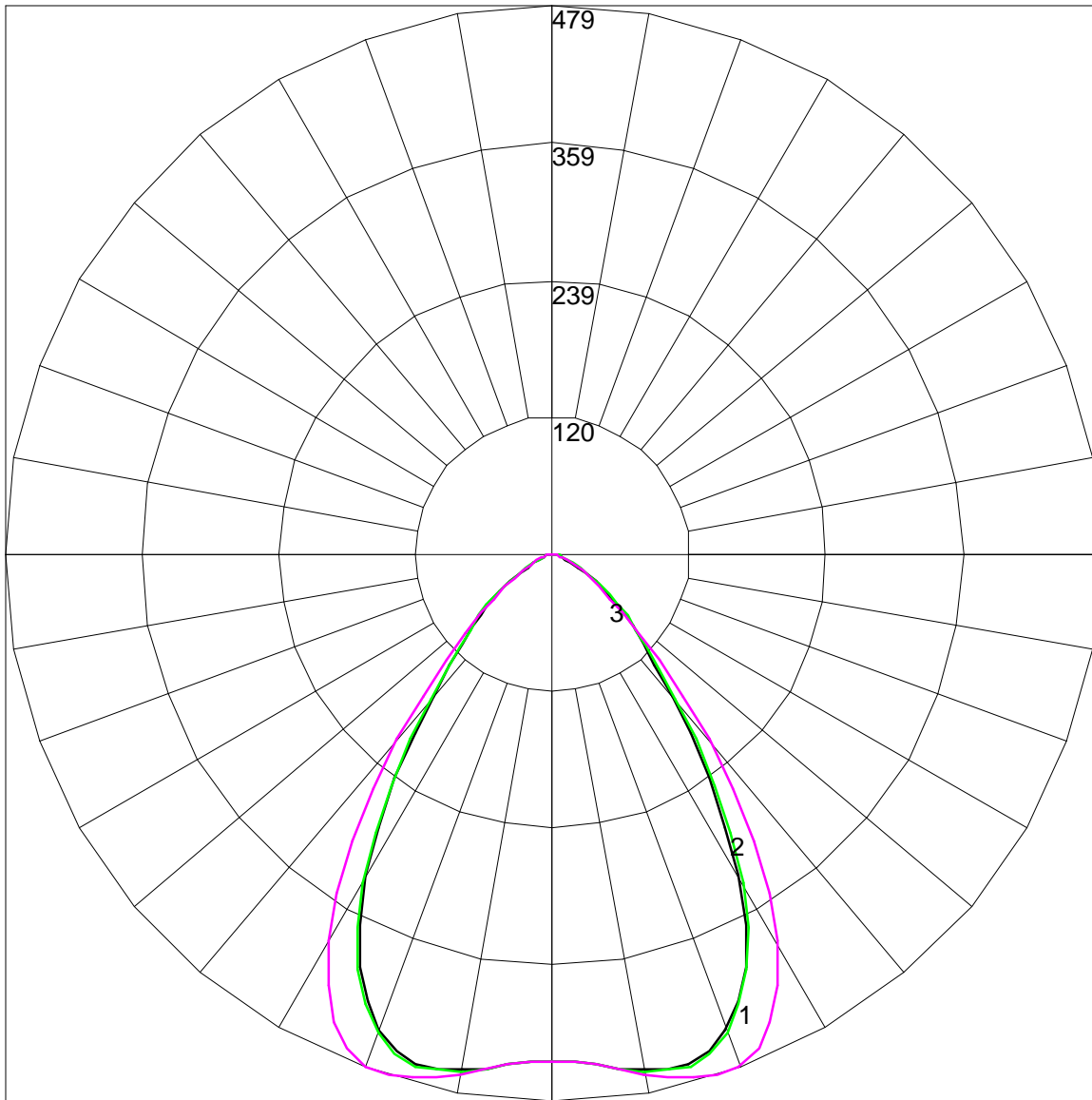
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	109	106	103	110	107	104	102	103	101	99	99	97	96	95	94	93	91
2	105	99	95	91	103	98	93	89	94	91	87	91	88	86	88	86	84	82
3	99	91	85	80	96	89	84	79	87	82	78	84	80	77	82	78	76	74
4	92	83	77	72	90	82	76	71	80	74	70	78	73	69	76	72	69	67
5	86	77	70	64	85	76	69	64	74	68	64	72	67	63	70	66	62	61
6	81	71	63	58	79	70	63	58	68	62	58	67	61	57	65	61	57	55
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	51
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46
9	68	56	50	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	41	51	45	41	50	45	41	50	45	41	40

POLAR GRAPH



Maximum Candela = 478.61 Located At Horizontal Angle = 45, Vertical Angle = 17.5

- # 1 - Vertical Plane Through Horizontal Angles (0 - 180)
- # 2 - Vertical Plane Through Horizontal Angles (90 - 270)
- # 3 - Vertical Plane Through Horizontal Angles (45 - 225)