

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : SGE4SQLEDOS-30L35KEX-CA0244OS-SGSO.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] 102560753CRT-017  
[TESTLAB] Intertek  
[ISSUE DATE] 11/14/2016  
[UPDATE] 1/4/2017  
[LAB-REF LUMCAT] CRT1611041146-006B  
[MANUFAC] Spectrum Lighting  
[LUMCAT] SGE4SQLEDOS-30L-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

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2081
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	76
Total Luminaire Watts	27.4
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	51306	60991	53347
55	32074	28777	34142
65	13504	11730	15040
75	4497	4626	5275
85	2825	7704	3852

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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>
<b>0.0</b>	1294.7	1294.7	1294.7	1294.7	1294.7	1294.7	1294.7	1294.7	1294.7	1294.7
<b>2.5</b>	1297.3	1299.8	1297.0	1299.9	1300.4	1299.9	1297.0	1299.8	1297.3	1299.8
<b>5.0</b>	1308.6	1306.2	1308.4	1310.5	1308.8	1310.5	1308.4	1306.2	1308.6	1306.2
<b>7.5</b>	1324.9	1324.1	1328.1	1325.4	1324.9	1325.4	1328.1	1324.1	1324.9	1324.1
<b>10.0</b>	1339.5	1341.3	1347.9	1343.7	1341.3	1343.7	1347.9	1341.3	1339.5	1341.3
<b>12.5</b>	1348.6	1354.2	1368.4	1360.6	1352.3	1360.6	1368.4	1354.2	1348.6	1354.2
<b>15.0</b>	1351.2	1364.5	1385.0	1376.3	1355.0	1376.3	1385.0	1364.5	1351.2	1364.5
<b>17.5</b>	1332.3	1357.1	1397.4	1374.6	1336.3	1374.6	1397.4	1357.1	1332.3	1357.1
<b>20.0</b>	1293.1	1332.7	1393.3	1358.0	1300.0	1358.0	1393.3	1332.7	1293.1	1332.7
<b>22.5</b>	1235.8	1291.4	1370.4	1323.9	1245.8	1323.9	1370.4	1291.4	1235.8	1291.4
<b>25.0</b>	1161.4	1231.9	1319.2	1265.4	1172.6	1265.4	1319.2	1231.9	1161.4	1231.9
<b>27.5</b>	1068.3	1146.6	1242.4	1187.0	1079.0	1187.0	1242.4	1146.6	1068.3	1146.6
<b>30.0</b>	951.2	1040.3	1144.1	1084.9	969.1	1084.9	1144.1	1040.3	951.2	1040.3
<b>32.5</b>	825.9	920.8	1025.9	967.5	846.1	967.5	1025.9	920.8	825.9	920.8
<b>35.0</b>	700.4	792.1	895.1	837.8	719.7	837.8	895.1	792.1	700.4	792.1
<b>37.5</b>	580.4	662.0	755.6	705.1	597.1	705.1	755.6	662.0	580.4	662.0
<b>40.0</b>	474.2	542.0	619.0	579.0	488.6	579.0	619.0	542.0	474.2	542.0
<b>42.5</b>	388.6	438.4	493.1	466.1	401.6	466.1	493.1	438.4	388.6	438.4
<b>45.0</b>	324.2	356.0	385.4	374.1	337.1	374.1	385.4	356.0	324.2	356.0
<b>47.5</b>	276.3	292.3	299.8	303.2	288.2	303.2	299.8	292.3	276.3	292.3
<b>50.0</b>	238.3	243.3	235.2	249.0	248.5	249.0	235.2	243.3	238.3	243.3
<b>52.5</b>	201.8	202.4	186.4	206.0	212.0	206.0	186.4	202.4	201.8	202.4
<b>55.0</b>	164.4	163.9	147.5	166.5	175.0	166.5	147.5	163.9	164.4	163.9
<b>57.5</b>	129.0	127.9	114.6	130.4	139.5	130.4	114.6	127.9	129.0	127.9
<b>60.0</b>	97.7	95.7	86.7	98.3	106.6	98.3	86.7	95.7	97.7	95.7
<b>62.5</b>	71.3	68.6	63.3	70.8	78.3	70.8	63.3	68.6	71.3	68.6
<b>65.0</b>	51.0	47.1	44.3	48.8	56.8	48.8	44.3	47.1	51.0	47.1
<b>67.5</b>	37.0	32.7	30.1	33.2	41.8	33.2	30.1	32.7	37.0	32.7
<b>70.0</b>	22.7	20.6	20.6	22.3	26.4	22.3	20.6	20.6	22.7	20.6
<b>72.5</b>	14.5	13.8	14.3	14.7	17.2	14.7	14.3	13.8	14.5	13.8
<b>75.0</b>	10.4	10.4	10.7	10.8	12.2	10.8	10.7	10.4	10.4	10.4
<b>77.5</b>	8.7	9.0	8.6	9.1	9.6	9.1	8.6	9.0	8.7	9.0
<b>80.0</b>	6.9	7.3	7.0	8.0	7.8	8.0	7.0	7.3	6.9	7.3
<b>82.5</b>	3.5	5.2	6.5	6.8	5.1	6.8	6.5	5.2	3.5	5.2
<b>85.0</b>	2.2	3.8	6.0	5.6	3.0	5.6	6.0	3.8	2.2	3.8
<b>87.5</b>	1.7	2.9	4.4	4.0	2.1	4.0	4.4	2.9	1.7	2.9
<b>90.0</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**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>
<b>0.0</b>	1294.7	1294.7	1294.7	1294.7	1294.7	1294.7	1294.7
<b>2.5</b>	1297.0	1299.9	1300.4	1299.9	1297.0	1299.8	1297.3
<b>5.0</b>	1308.4	1310.5	1308.8	1310.5	1308.4	1306.2	1308.6
<b>7.5</b>	1328.1	1325.4	1324.9	1325.4	1328.1	1324.1	1324.9
<b>10.0</b>	1347.9	1343.7	1341.3	1343.7	1347.9	1341.3	1339.5
<b>12.5</b>	1368.4	1360.6	1352.3	1360.6	1368.4	1354.2	1348.6
<b>15.0</b>	1385.0	1376.3	1355.0	1376.3	1385.0	1364.5	1351.2
<b>17.5</b>	1397.4	1374.6	1336.3	1374.6	1397.4	1357.1	1332.3
<b>20.0</b>	1393.3	1358.0	1300.0	1358.0	1393.3	1332.7	1293.1
<b>22.5</b>	1370.4	1323.9	1245.8	1323.9	1370.4	1291.4	1235.8
<b>25.0</b>	1319.2	1265.4	1172.6	1265.4	1319.2	1231.9	1161.4
<b>27.5</b>	1242.4	1187.0	1079.0	1187.0	1242.4	1146.6	1068.3
<b>30.0</b>	1144.1	1084.9	969.1	1084.9	1144.1	1040.3	951.2

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<b>32.5</b>	1025.9	967.5	846.1	967.5	1025.9	920.8	825.9
<b>35.0</b>	895.1	837.8	719.7	837.8	895.1	792.1	700.4
<b>37.5</b>	755.6	705.1	597.1	705.1	755.6	662.0	580.4
<b>40.0</b>	619.0	579.0	488.6	579.0	619.0	542.0	474.2
<b>42.5</b>	493.1	466.1	401.6	466.1	493.1	438.4	388.6
<b>45.0</b>	385.4	374.1	337.1	374.1	385.4	356.0	324.2
<b>47.5</b>	299.8	303.2	288.2	303.2	299.8	292.3	276.3
<b>50.0</b>	235.2	249.0	248.5	249.0	235.2	243.3	238.3
<b>52.5</b>	186.4	206.0	212.0	206.0	186.4	202.4	201.8
<b>55.0</b>	147.5	166.5	175.0	166.5	147.5	163.9	164.4
<b>57.5</b>	114.6	130.4	139.5	130.4	114.6	127.9	129.0
<b>60.0</b>	86.7	98.3	106.6	98.3	86.7	95.7	97.7
<b>62.5</b>	63.3	70.8	78.3	70.8	63.3	68.6	71.3
<b>65.0</b>	44.3	48.8	56.8	48.8	44.3	47.1	51.0
<b>67.5</b>	30.1	33.2	41.8	33.2	30.1	32.7	37.0
<b>70.0</b>	20.6	22.3	26.4	22.3	20.6	20.6	22.7
<b>72.5</b>	14.3	14.7	17.2	14.7	14.3	13.8	14.5
<b>75.0</b>	10.7	10.8	12.2	10.8	10.7	10.4	10.4
<b>77.5</b>	8.6	9.1	9.6	9.1	8.6	9.0	8.7
<b>80.0</b>	7.0	8.0	7.8	8.0	7.0	7.3	6.9
<b>82.5</b>	6.5	6.8	5.1	6.8	6.5	5.2	3.5
<b>85.0</b>	6.0	5.6	3.0	5.6	6.0	3.8	2.2
<b>87.5</b>	4.4	4.0	2.1	4.0	4.4	2.9	1.7
<b>90.0</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	511.58	N.A.	24.60
0-30	1076.56	N.A.	51.70
0-40	1577.69	N.A.	75.80
0-60	2011.82	N.A.	96.70
0-80	2076.56	N.A.	99.80
0-90	2081.25	N.A.	100.00
10-90	1955.16	N.A.	93.90
20-40	1066.11	N.A.	51.20
20-50	1353.84	N.A.	65.00
40-70	485.93	N.A.	23.30
60-80	64.75	N.A.	3.10
70-80	12.94	N.A.	0.60
80-90	4.69	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	2081.25	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	126.09
10-20	385.49
20-30	564.98
30-40	501.12
40-50	287.74
50-60	146.39
60-70	51.80
70-80	12.94
80-90	4.69
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

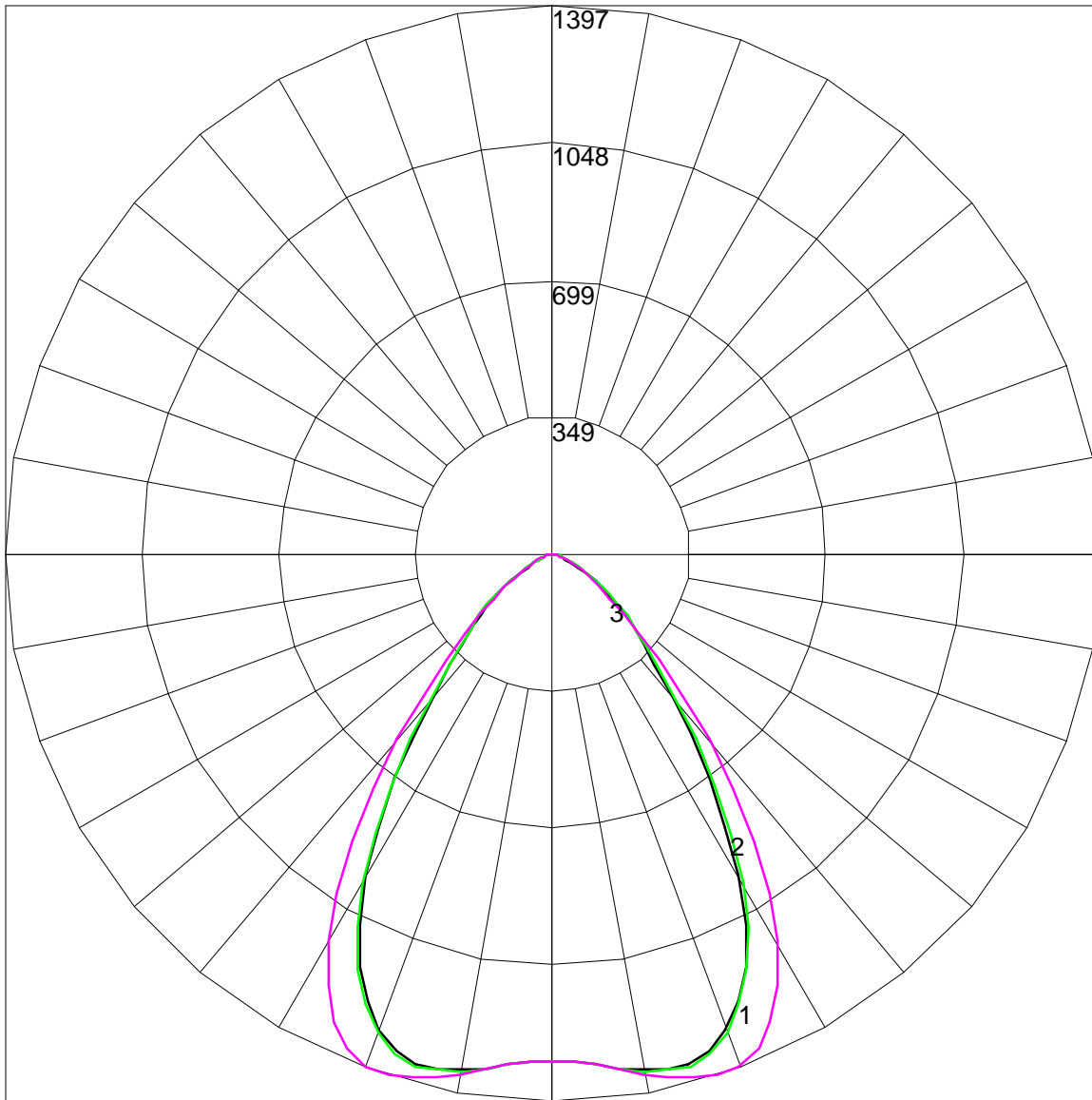
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	90	94	91	88	91	88	86	88	86	84	82
3	99	91	85	80	96	89	84	79	87	82	78	84	80	77	82	79	76	74
4	92	83	77	72	90	82	76	71	80	74	70	78	73	69	76	72	69	67
5	87	77	70	64	85	76	69	64	74	68	64	72	67	63	70	66	62	61
6	81	71	64	58	80	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	57	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	51	45	41	50	45	41	40

POLAR GRAPH



Maximum Candela = 1397.4 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)