

IES INDOOR REPORT**PHOTOMETRIC FILENAME : SGE4SQLEDOS-20L35KEX-CA0244OS-SGSO.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] 102560753CRT-017_M-20L
[TESTLAB] Intertek
[ISSUE DATE] 11/14/2016
[UPDATE] 1/4/2017
[LAB-REF LUMCAT] CRT1611041146-006B_M-20L
[MANUFAC] Spectrum Lighting
[LUMCAT] SGE4SQLEDOS-20L-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	1514
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	75
Total Luminaire Watts	20.24
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : SGE4SQLEDOS-20L35KEX-CA0244OS-SGSO.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	37325	44371	38810
55	23334	20935	24838
65	9824	8533	10941
75	3271	3365	3838
85	2056	5604	2803

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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	941.894	941.894	941.894	941.894	941.894	941.894	941.894	941.894	941.894	941.894
2.5	943.786	945.605	943.568	945.677	946.041	945.677	943.568	945.605	943.786	945.605
5.0	952.007	950.261	951.861	953.389	952.152	953.389	951.861	950.261	952.007	950.261
7.5	963.865	963.283	966.193	964.229	963.865	964.229	966.193	963.283	963.865	963.283
10.0	974.486	975.796	980.597	977.542	975.796	977.542	980.597	975.796	974.486	975.796
12.5	981.107	985.181	995.511	989.837	983.798	989.837	995.511	985.181	981.107	985.181
15.0	982.998	992.674	1007.588	1001.258	985.763	1001.258	1007.588	992.674	982.998	992.674
17.5	969.248	987.290	1016.609	1000.022	972.158	1000.022	1016.609	987.290	969.248	987.290
20.0	940.730	969.539	1013.626	987.945	945.750	987.945	1013.626	969.539	940.730	969.539
22.5	899.045	939.494	996.966	963.137	906.320	963.137	996.966	939.494	899.045	939.494
25.0	844.919	896.207	959.718	920.579	853.067	920.579	959.718	896.207	844.919	896.207
27.5	777.188	834.152	903.846	863.543	784.973	863.543	903.846	834.152	777.188	834.152
30.0	691.998	756.818	832.333	789.265	705.020	789.265	832.333	756.818	691.998	756.818
32.5	600.842	669.882	746.342	703.856	615.538	703.856	746.342	669.882	600.842	669.882
35.0	509.541	576.253	651.185	609.500	523.582	609.500	651.185	576.253	509.541	576.253
37.5	422.241	481.605	549.699	512.960	434.390	512.960	549.699	481.605	422.241	481.605
40.0	344.981	394.305	450.323	421.223	355.457	421.223	450.323	394.305	344.981	394.305
42.5	282.707	318.936	358.730	339.088	292.164	339.088	358.730	318.936	282.707	318.936
45.0	235.856	258.990	280.379	272.158	245.240	272.158	280.379	258.990	235.856	258.990
47.5	201.008	212.648	218.105	220.578	209.666	220.578	218.105	212.648	201.008	212.648
50.0	173.363	177.001	171.108	181.148	180.784	181.148	171.108	177.001	173.363	177.001
52.5	146.810	147.246	135.606	149.865	154.230	149.865	135.606	147.246	146.810	147.246
55.0	119.601	119.237	107.306	121.129	127.313	121.129	107.306	119.237	119.601	119.237
57.5	93.848	93.047	83.372	94.866	101.486	94.866	83.372	93.047	93.848	93.047
60.0	71.077	69.622	63.074	71.513	77.552	71.513	63.074	69.622	71.077	69.622
62.5	51.871	49.907	46.051	51.507	56.963	51.507	46.051	49.907	51.871	49.907
65.0	37.103	34.265	32.228	35.502	41.322	35.502	32.228	34.265	37.103	34.265
67.5	26.918	23.789	21.898	24.153	30.410	24.153	21.898	23.789	26.918	23.789
70.0	16.514	14.987	14.987	16.223	19.206	16.223	14.987	14.987	16.514	14.987
72.5	10.549	10.040	10.403	10.694	12.513	10.694	10.403	10.040	10.549	10.040
75.0	7.566	7.566	7.784	7.857	8.876	7.857	7.784	7.566	7.566	7.566
77.5	6.329	6.548	6.257	6.620	6.984	6.620	6.257	6.548	6.329	6.548
80.0	5.020	5.311	5.093	5.820	5.675	5.820	5.093	5.311	5.020	5.311
82.5	2.546	3.783	4.729	4.947	3.710	4.947	4.729	3.783	2.546	3.783
85.0	1.601	2.765	4.365	4.074	2.183	4.074	4.365	2.765	1.601	2.765
87.5	1.237	2.110	3.201	2.910	1.528	2.910	3.201	2.110	1.237	2.110
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	941.894	941.894	941.894	941.894	941.894	941.894	941.894
2.5	943.568	945.677	946.041	945.677	943.568	945.605	943.786
5.0	951.861	953.389	952.152	953.389	951.861	950.261	952.007
7.5	966.193	964.229	963.865	964.229	966.193	963.283	963.865
10.0	980.597	977.542	975.796	977.542	980.597	975.796	974.486
12.5	995.511	989.837	983.798	989.837	995.511	985.181	981.107
15.0	1007.588	1001.258	985.763	1001.258	1007.588	992.674	982.998
17.5	1016.609	1000.022	972.158	1000.022	1016.609	987.290	969.248
20.0	1013.626	987.945	945.750	987.945	1013.626	969.539	940.730
22.5	996.966	963.137	906.320	963.137	996.966	939.494	899.045
25.0	959.718	920.579	853.067	920.579	959.718	896.207	844.919
27.5	903.846	863.543	784.973	863.543	903.846	834.152	777.188
30.0	832.333	789.265	705.020	789.265	832.333	756.818	691.998

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PHOTOMETRIC FILENAME : SGE4SQLEDOS-20L35KEX-CA0244OS-SGSO.IES

CANDELA TABULATION - (Cont.)

32.5	746.342	703.856	615.538	703.856	746.342	669.882	600.842
35.0	651.185	609.500	523.582	609.500	651.185	576.253	509.541
37.5	549.699	512.960	434.390	512.960	549.699	481.605	422.241
40.0	450.323	421.223	355.457	421.223	450.323	394.305	344.981
42.5	358.730	339.088	292.164	339.088	358.730	318.936	282.707
45.0	280.379	272.158	245.240	272.158	280.379	258.990	235.856
47.5	218.105	220.578	209.666	220.578	218.105	212.648	201.008
50.0	171.108	181.148	180.784	181.148	171.108	177.001	173.363
52.5	135.606	149.865	154.230	149.865	135.606	147.246	146.810
55.0	107.306	121.129	127.313	121.129	107.306	119.237	119.601
57.5	83.372	94.866	101.486	94.866	83.372	93.047	93.848
60.0	63.074	71.513	77.552	71.513	63.074	69.622	71.077
62.5	46.051	51.507	56.963	51.507	46.051	49.907	51.871
65.0	32.228	35.502	41.322	35.502	32.228	34.265	37.103
67.5	21.898	24.153	30.410	24.153	21.898	23.789	26.918
70.0	14.987	16.223	19.206	16.223	14.987	14.987	16.514
72.5	10.403	10.694	12.513	10.694	10.403	10.040	10.549
75.0	7.784	7.857	8.876	7.857	7.784	7.566	7.566
77.5	6.257	6.620	6.984	6.620	6.257	6.548	6.329
80.0	5.093	5.820	5.675	5.820	5.093	5.311	5.020
82.5	4.729	4.947	3.710	4.947	4.729	3.783	2.546
85.0	4.365	4.074	2.183	4.074	4.365	2.765	1.601
87.5	3.201	2.910	1.528	2.910	3.201	2.110	1.237
90.0	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	372.17	N.A.	24.60
0-30	783.20	N.A.	51.70
0-40	1147.77	N.A.	75.80
0-60	1463.6	N.A.	96.70
0-80	1510.7	N.A.	99.80
0-90	1514.11	N.A.	100.00
10-90	1422.38	N.A.	93.90
20-40	775.59	N.A.	51.20
20-50	984.92	N.A.	65.00
40-70	353.52	N.A.	23.30
60-80	47.10	N.A.	3.10
70-80	9.42	N.A.	0.60
80-90	3.41	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	1514.11	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	91.73
10-20	280.45
20-30	411.03
30-40	364.57
40-50	209.33
50-60	106.50
60-70	37.69
70-80	9.42
80-90	3.41
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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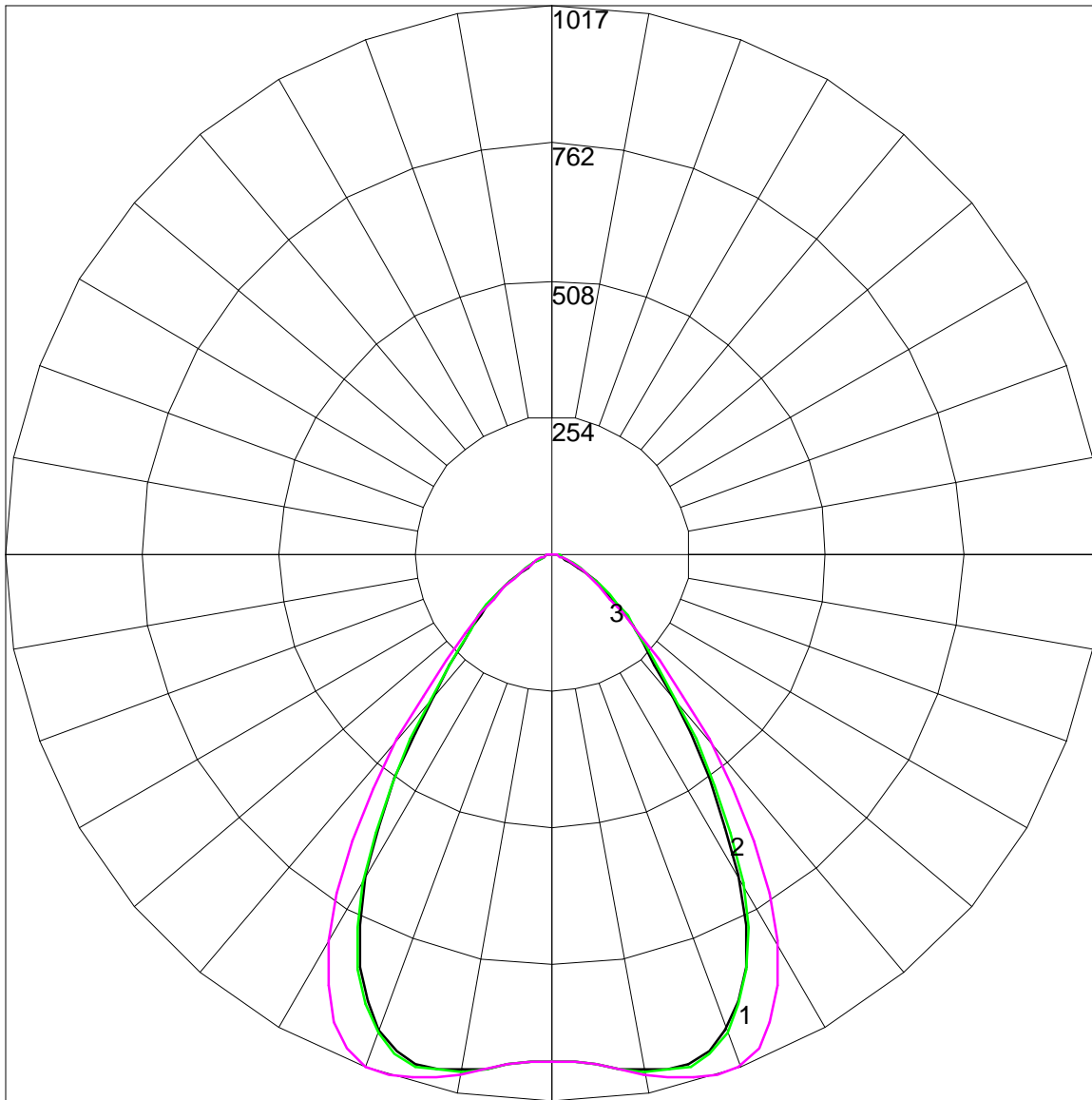
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	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	51	45	41	50	45	41	40

POLAR GRAPH



Maximum Candela = 1016.609 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)