

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : SGE4LEDOS-20L35KEX-AR4223OSSGSO.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] 102560753CRT-004\_M-20L  
[TESTLAB] Intertek  
[ISSUE DATE] 09/19/2016  
[UPDATE] 10/28/2016  
[LAB-REF LUMCAT] CRT1609071034-002\_M-20L  
[MANUFAC] Spectrum Lighting  
[LUMCAT] SGE4LEDOS-20L-35K-EX-AR4223OS-SG-SO  
[LUMINAIRE] 4" DIAM. LED DOWNLIGHT SEMI-DIFFUSE CLEAR ANODIZED CONE  
[OTHER] SHALLOW PROFILE  
[OTHER] REGRESSED, INTEGRAL SOLITE GLASS LENS  
[OTHER] 48.5 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 0.945  
[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	1722
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	20.24
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.74
Spacing Criterion (90-270)	0.74
Spacing Criterion (Diagonal)	0.80
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.33 ft (Diameter)
Luminous Width (90-270)	0.33 ft (Diameter)
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	29118	28963	29222
55	12423	12311	12614
65	2338	2338	2468
75	0	0	0
85	0	0	0

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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>	2311.486	2311.486	2311.486	2311.486	2311.486	2311.486	2311.486	2311.486	2311.486	2311.486
<b>2.5</b>	2300.864	2303.047	2306.030	2298.536	2301.883	2298.536	2306.030	2303.047	2300.864	2303.047
<b>5.0</b>	2247.102	2251.394	2250.521	2248.048	2242.519	2248.048	2250.521	2251.394	2247.102	2251.394
<b>7.5</b>	2151.872	2146.853	2157.474	2152.745	2156.165	2152.745	2157.474	2146.853	2151.872	2146.853
<b>10.0</b>	2023.978	2014.884	2017.940	2020.340	2018.231	2020.340	2017.940	2014.884	2023.978	2014.884
<b>12.5</b>	1861.891	1858.253	1853.379	1842.030	1858.472	1842.030	1853.379	1858.253	1861.891	1858.253
<b>15.0</b>	1694.930	1689.837	1685.981	1695.148	1701.404	1695.148	1685.981	1689.837	1694.930	1689.837
<b>17.5</b>	1520.766	1528.332	1525.495	1543.610	1534.952	1543.610	1525.495	1528.332	1520.766	1528.332
<b>20.0</b>	1384.360	1388.725	1390.471	1383.341	1386.179	1383.341	1390.471	1388.725	1384.360	1388.725
<b>22.5</b>	1243.807	1239.878	1253.919	1252.682	1259.739	1252.682	1253.919	1239.878	1243.807	1239.878
<b>25.0</b>	1123.842	1117.076	1123.769	1112.639	1103.472	1112.639	1123.769	1117.076	1123.842	1117.076
<b>27.5</b>	977.760	971.431	967.939	972.813	978.997	972.813	967.939	971.431	977.760	971.431
<b>30.0</b>	830.660	825.713	822.584	826.513	835.898	826.513	822.584	825.713	830.660	825.713
<b>32.5</b>	682.395	681.813	683.923	681.740	679.849	681.740	683.923	681.813	682.395	681.813
<b>35.0</b>	540.314	541.478	544.825	541.915	539.296	541.915	544.825	541.478	540.314	541.478
<b>37.5</b>	410.165	411.110	413.511	411.838	410.528	411.838	413.511	411.110	410.165	411.110
<b>40.0</b>	301.694	301.622	300.967	302.567	302.640	302.567	300.967	301.622	301.694	301.622
<b>42.5</b>	219.851	219.341	217.377	220.796	221.451	220.796	217.377	219.341	219.851	219.341
<b>45.0</b>	163.760	163.833	162.887	163.760	164.342	163.760	162.887	163.833	163.760	163.833
<b>47.5</b>	124.475	124.330	123.748	124.403	124.694	124.403	123.748	124.330	124.475	124.330
<b>50.0</b>	96.539	95.812	95.521	96.321	96.685	96.321	95.521	95.812	96.539	95.812
<b>52.5</b>	74.714	73.914	73.478	74.933	75.151	74.933	73.478	73.914	74.714	73.914
<b>55.0</b>	56.672	56.236	56.163	57.182	57.545	57.182	56.163	56.236	56.672	56.236
<b>57.5</b>	42.050	42.050	41.904	42.777	42.632	42.777	41.904	42.050	42.050	42.050
<b>60.0</b>	29.318	29.755	29.682	30.046	30.191	30.046	29.682	29.755	29.318	29.755
<b>62.5</b>	18.260	18.188	18.115	18.551	18.551	18.551	18.115	18.188	18.260	18.188
<b>65.0</b>	7.857	7.930	7.857	8.003	8.294	8.003	7.857	7.930	7.857	7.930
<b>67.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>70.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>72.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>75.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>77.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>80.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>82.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>85.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>87.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>90.0</b>	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>
<b>0.0</b>	2311.486	2311.486	2311.486	2311.486	2311.486	2311.486	2311.486
<b>2.5</b>	2306.030	2298.536	2301.883	2298.536	2306.030	2303.047	2300.864
<b>5.0</b>	2250.521	2248.048	2242.519	2248.048	2250.521	2251.394	2247.102
<b>7.5</b>	2157.474	2152.745	2156.165	2152.745	2157.474	2146.853	2151.872
<b>10.0</b>	2017.940	2020.340	2018.231	2020.340	2017.940	2014.884	2023.978
<b>12.5</b>	1853.379	1842.030	1858.472	1842.030	1853.379	1858.253	1861.891
<b>15.0</b>	1685.981	1695.148	1701.404	1695.148	1685.981	1689.837	1694.930
<b>17.5</b>	1525.495	1543.610	1534.952	1543.610	1525.495	1528.332	1520.766
<b>20.0</b>	1390.471	1383.341	1386.179	1383.341	1390.471	1388.725	1384.360
<b>22.5</b>	1253.919	1252.682	1259.739	1252.682	1253.919	1239.878	1243.807
<b>25.0</b>	1123.769	1112.639	1103.472	1112.639	1123.769	1117.076	1123.842
<b>27.5</b>	967.939	972.813	978.997	972.813	967.939	971.431	977.760
<b>30.0</b>	822.584	826.513	835.898	826.513	822.584	825.713	830.660

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**CANDELA TABULATION - (Cont.)**

<b>32.5</b>	683.923	681.740	679.849	681.740	683.923	681.813	682.395
<b>35.0</b>	544.825	541.915	539.296	541.915	544.825	541.478	540.314
<b>37.5</b>	413.511	411.838	410.528	411.838	413.511	411.110	410.165
<b>40.0</b>	300.967	302.567	302.640	302.567	300.967	301.622	301.694
<b>42.5</b>	217.377	220.796	221.451	220.796	217.377	219.341	219.851
<b>45.0</b>	162.887	163.760	164.342	163.760	162.887	163.833	163.760
<b>47.5</b>	123.748	124.403	124.694	124.403	123.748	124.330	124.475
<b>50.0</b>	95.521	96.321	96.685	96.321	95.521	95.812	96.539
<b>52.5</b>	73.478	74.933	75.151	74.933	73.478	73.914	74.714
<b>55.0</b>	56.163	57.182	57.545	57.182	56.163	56.236	56.672
<b>57.5</b>	41.904	42.777	42.632	42.777	41.904	42.050	42.050
<b>60.0</b>	29.682	30.046	30.191	30.046	29.682	29.755	29.318
<b>62.5</b>	18.115	18.551	18.551	18.551	18.115	18.188	18.260
<b>65.0</b>	7.857	8.003	8.294	8.003	7.857	7.930	7.857
<b>67.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>70.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>72.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>75.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>77.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>80.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>82.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>85.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>87.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<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	678.52	N.A.	39.40
0-30	1185.45	N.A.	68.90
0-40	1524.49	N.A.	88.60
0-60	1711.55	N.A.	99.40
0-80	1721.57	N.A.	100.00
0-90	1721.57	N.A.	100.00
10-90	1514.32	N.A.	88.00
20-40	845.97	N.A.	49.10
20-50	980.62	N.A.	57.00
40-70	197.08	N.A.	11.40
60-80	10.01	N.A.	0.60
70-80	0.00	N.A.	0.00
80-90	0.00	N.A.	0.00
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	1721.57	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

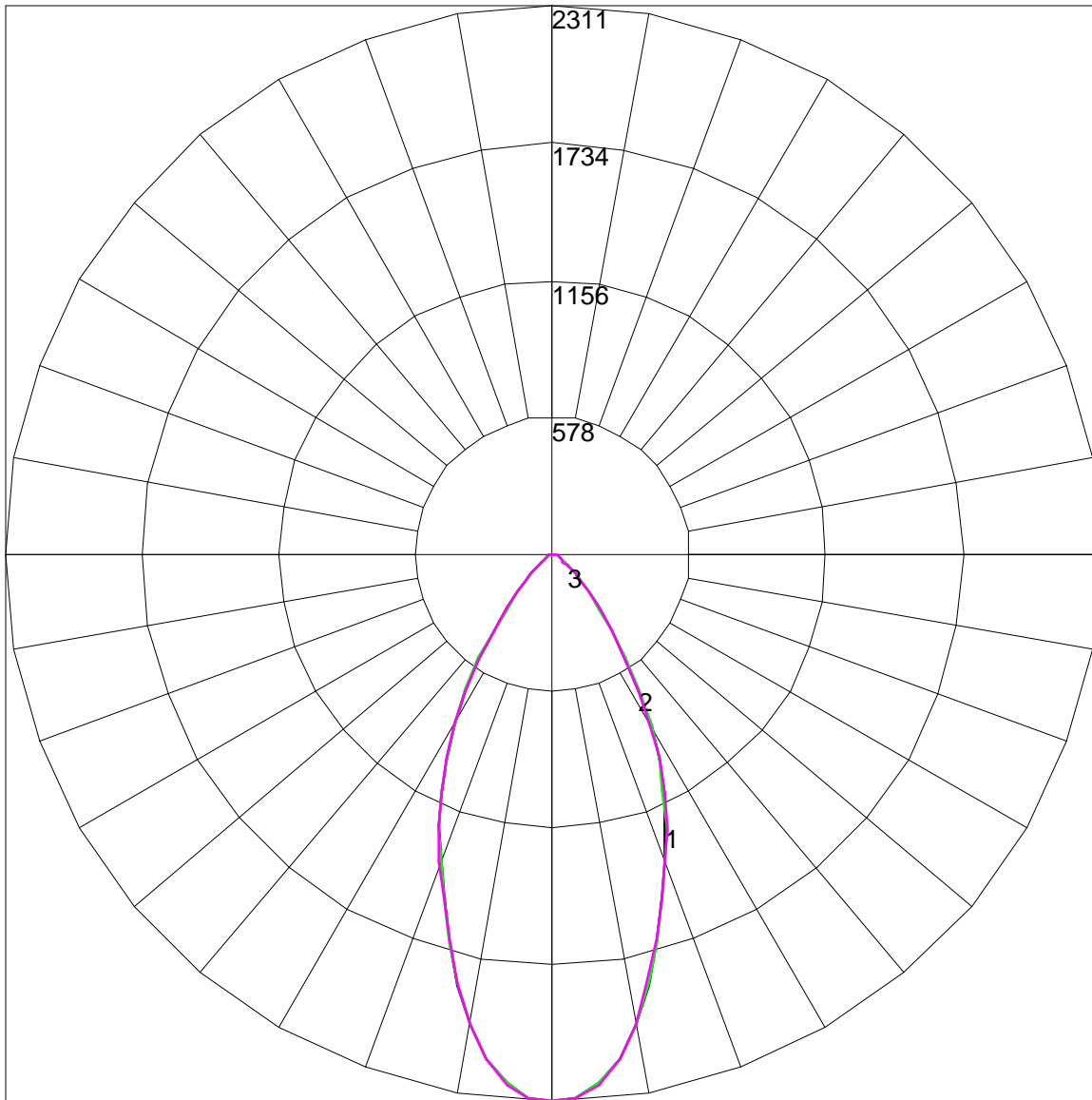
Zone	Lumens
0-10	207.25
10-20	471.27
20-30	506.92
30-40	339.05
40-50	134.65
50-60	52.41
60-70	10.01
70-80	0.00
80-90	0.00
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80
4	97	89	84	79	95	88	83	79	86	81	78	84	80	77	82	79	76	75
5	92	83	78	73	90	82	77	73	81	76	72	79	75	72	77	74	71	69
6	87	78	72	68	86	77	72	68	76	71	67	74	70	67	73	69	66	65
7	83	74	67	63	82	73	67	63	72	66	63	70	66	62	69	65	62	61
8	79	69	63	59	78	69	63	59	68	62	59	67	62	58	66	61	58	57
9	75	65	59	55	74	65	59	55	64	59	55	63	58	55	62	58	55	53
10	72	62	56	52	71	62	56	52	61	56	52	60	55	52	59	55	52	50

POLAR GRAPH



Maximum Candela = 2311.486 Located At Horizontal Angle = 0, Vertical Angle = 0

# 1 - Vertical Plane Through Horizontal Angles (0 - 180)

# 2 - Vertical Plane Through Horizontal Angles (90 - 270)

# 3 - Vertical Plane Through Horizontal Angles (45 - 225)