



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GA22-LED-VHO-WW-P12.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]LED-4187A  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUE DATE]03/2/16  
[TEST DATE]06/18/13  
[MANUFACTURER]LSI INDUSTRIES, INC  
[ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.  
[OTHER]SCALED FROM ORIGINAL TEST DATA  
[OTHER]TEST PROCEDURE: IESNA LM-79-08  
[SEARCH\_SOURCE TYPE] LED  
[SEARCH\_APPLICATION] Indoor  
[LUMCAT]GA22-LED-VHO-WW-P12

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5139
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	45
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	2.00 ft
Luminous Width (90-270)	2.00 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4754	4768	4768
55	3708	3643	3317
65	2738	2398	2398
75	2217	1856	2434
85	2898	2934	3542

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**CANDELA TABULATION**

	<u><b>0.0</b></u>	<u><b>22.5</b></u>	<u><b>45.0</b></u>	<u><b>67.5</b></u>	<u><b>90.0</b></u>
<b>0.0</b>	2200.52	2200.52	2200.52	2200.52	2200.52
<b>2.5</b>	2187.76	2194.72	2206.32	2207.48	2206.32
<b>5.0</b>	2183.12	2192.40	2201.68	2204.00	2202.84
<b>7.5</b>	2168.04	2178.48	2190.08	2194.72	2192.40
<b>10.0</b>	2149.48	2162.24	2176.16	2179.64	2178.48
<b>12.5</b>	2125.12	2136.72	2151.80	2155.28	2158.76
<b>15.0</b>	2093.80	2105.40	2120.48	2132.08	2137.88
<b>17.5</b>	2059.00	2075.24	2090.32	2101.92	2108.88
<b>20.0</b>	2019.56	2032.32	2052.04	2065.96	2076.40
<b>22.5</b>	1975.48	1984.76	2006.80	2025.36	2034.64
<b>25.0</b>	1926.76	1934.88	1956.92	1973.16	1982.44
<b>27.5</b>	1867.60	1875.72	1900.08	1916.32	1930.24
<b>30.0</b>	1800.32	1810.76	1831.64	1851.36	1867.60
<b>32.5</b>	1727.24	1738.84	1757.40	1780.60	1798.00
<b>35.0</b>	1647.20	1657.64	1677.36	1698.24	1716.80
<b>37.5</b>	1560.20	1569.48	1584.56	1603.12	1621.68
<b>40.0</b>	1463.92	1474.36	1482.48	1491.76	1509.16
<b>42.5</b>	1360.68	1367.64	1371.12	1374.60	1386.20
<b>45.0</b>	1250.48	1253.96	1253.96	1248.16	1253.96
<b>47.5</b>	1134.48	1137.96	1134.48	1117.08	1112.44
<b>50.0</b>	1016.16	1020.80	1017.32	981.36	969.76
<b>52.5</b>	899.00	904.80	897.84	846.80	831.72
<b>55.0</b>	791.12	792.28	777.20	721.52	707.60
<b>57.5</b>	689.04	680.92	657.72	610.16	598.56
<b>60.0</b>	595.08	577.68	549.84	517.36	508.08
<b>62.5</b>	508.08	483.72	454.72	439.64	431.52
<b>65.0</b>	430.36	404.84	377.00	380.48	377.00
<b>67.5</b>	367.72	341.04	309.72	330.60	328.28
<b>70.0</b>	309.72	285.36	254.04	290.00	290.00
<b>72.5</b>	258.68	238.96	209.96	257.52	258.68
<b>75.0</b>	213.44	203.00	178.64	227.36	234.32
<b>77.5</b>	176.32	170.52	155.44	198.36	211.12
<b>80.0</b>	146.16	139.20	135.72	170.52	184.44
<b>82.5</b>	118.32	110.20	113.68	141.52	153.12
<b>85.0</b>	93.96	90.48	95.12	110.20	114.84
<b>87.5</b>	60.32	59.16	59.16	77.72	74.24
<b>90.0</b>	19.72	20.88	17.40	19.72	16.24
<b>92.5</b>	2.32	2.32	2.32	2.32	2.32
<b>95.0</b>	2.32	2.32	2.32	2.32	1.16
<b>97.5</b>	2.32	2.32	2.32	2.32	2.32
<b>100.0</b>	2.32	2.32	2.32	2.32	2.32
<b>102.5</b>	2.32	2.32	2.32	2.32	2.32
<b>105.0</b>	2.32	2.32	2.32	2.32	2.32
<b>107.5</b>	2.32	2.32	2.32	2.32	2.32
<b>110.0</b>	2.32	2.32	2.32	2.32	2.32
<b>112.5</b>	2.32	2.32	2.32	2.32	2.32
<b>115.0</b>	2.32	2.32	2.32	2.32	2.32
<b>117.5</b>	2.32	2.32	2.32	2.32	2.32
<b>120.0</b>	2.32	2.32	2.32	2.32	2.32
<b>122.5</b>	2.32	2.32	2.32	2.32	2.32
<b>125.0</b>	2.32	2.32	2.32	2.32	2.32
<b>127.5</b>	2.32	2.32	3.48	2.32	3.48
<b>130.0</b>	3.48	3.48	3.48	3.48	2.32
<b>132.5</b>	3.48	3.48	3.48	3.48	2.32

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CANDELA TABULATION - (Cont.)

135.0	3.48	3.48	3.48	3.48	3.48
137.5	3.48	3.48	3.48	3.48	3.48
140.0	3.48	3.48	3.48	3.48	3.48
142.5	3.48	3.48	3.48	3.48	3.48
145.0	3.48	3.48	3.48	3.48	3.48
147.5	3.48	3.48	3.48	3.48	3.48
150.0	3.48	3.48	3.48	3.48	3.48
152.5	3.48	3.48	3.48	3.48	3.48
155.0	4.64	4.64	4.64	4.64	4.64
157.5	4.64	4.64	4.64	4.64	4.64
160.0	4.64	4.64	4.64	4.64	4.64
162.5	4.64	4.64	4.64	4.64	4.64
165.0	4.64	4.64	4.64	4.64	4.64
167.5	4.64	4.64	4.64	4.64	4.64
170.0	4.64	4.64	4.64	4.64	4.64
172.5	4.64	4.64	4.64	4.64	4.64
175.0	4.64	4.64	4.64	4.64	4.64
177.5	3.48	3.48	3.48	3.48	3.48
180.0	3.48	3.48	3.48	3.48	3.48

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	806.85	N.A.	15.70
0-30	1706.38	N.A.	33.20
0-40	2751.78	N.A.	53.50
0-60	4396.95	N.A.	85.60
0-80	5016.1	N.A.	97.60
0-90	5118.77	N.A.	99.60
10-90	4909.92	N.A.	95.50
20-40	1944.93	N.A.	37.80
20-50	2907.01	N.A.	56.60
40-70	2040.92	N.A.	39.70
60-80	619.14	N.A.	12.00
70-80	223.39	N.A.	4.30
80-90	102.67	N.A.	2.00
90-110	7.23	N.A.	0.10
90-120	9.53	N.A.	0.20
90-130	11.82	N.A.	0.20
90-150	16.66	N.A.	0.30
90-180	20.32	N.A.	0.40
110-180	13.09	N.A.	0.30
0-180	5139.09	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	208.85
10-20	598.01
20-30	899.52
30-40	1045.4
40-50	962.08
50-60	683.09
60-70	395.75
70-80	223.39
80-90	102.67
90-100	4.78
100-110	2.45
110-120	2.30
120-130	2.28
130-140	2.65
140-150	2.19
150-160	1.92
160-170	1.32
170-180	0.43

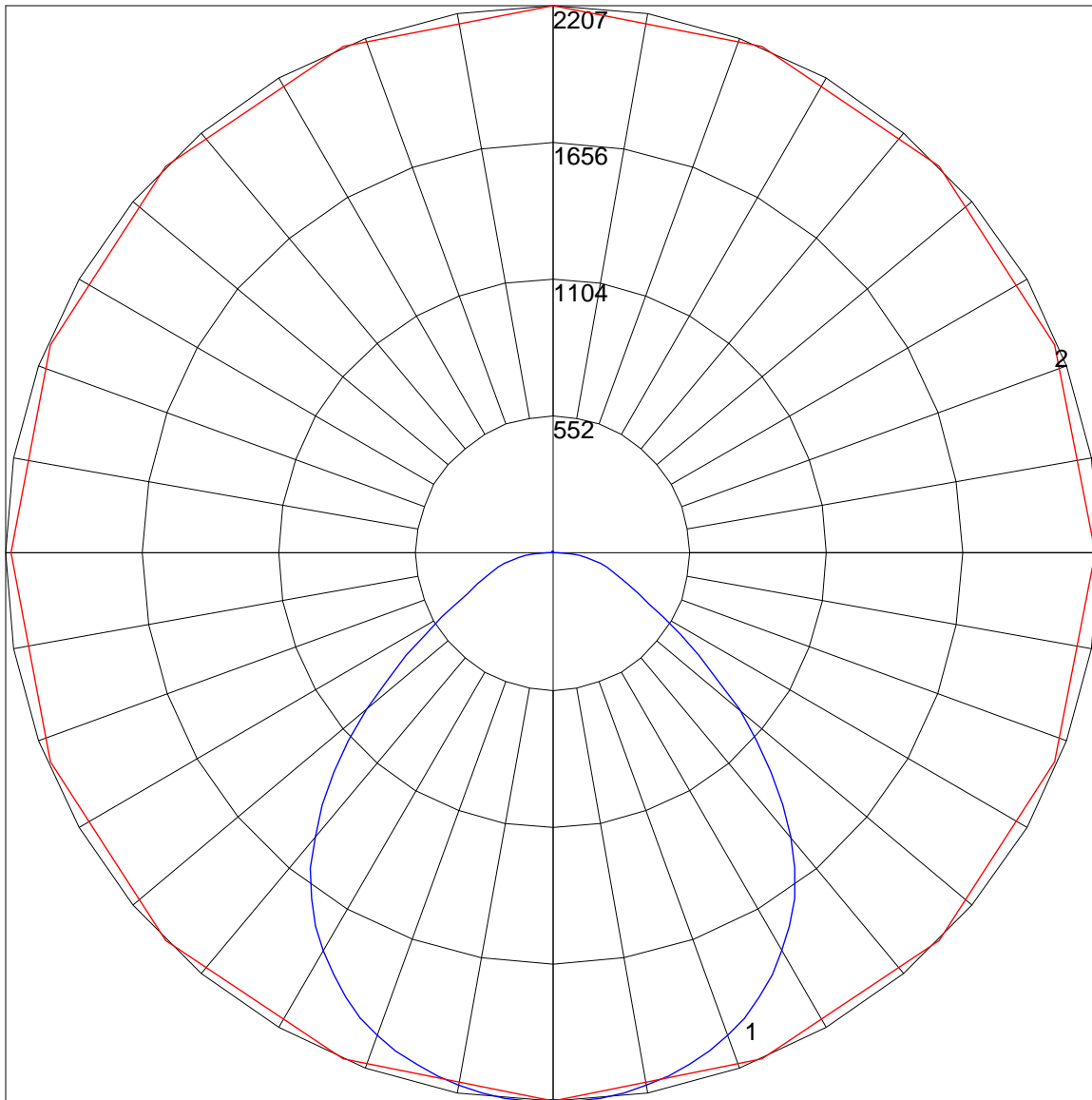
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	85
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	93	83	76	70	90	81	74	69	78	73	68	76	71	66	73	69	65	63
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	50	48
6	73	61	52	46	71	60	52	46	58	51	46	56	50	45	55	49	45	43
7	68	55	47	41	67	55	47	41	53	46	41	52	45	41	50	45	40	38
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	46	41	36	34
9	60	47	39	34	58	46	39	34	45	38	33	44	38	33	43	37	33	31
10	56	43	36	31	55	43	35	31	42	35	30	41	35	30	40	34	30	28

POLAR GRAPH



Maximum Candela = 2207.48 Located At Horizontal Angle = 67.5, Vertical Angle = 2.5  
# 1 - Vertical Plane Through Horizontal Angles (67.5 - 247.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)