



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

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]LED-4159A  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUE DATE]03/2/16  
[TEST DATE]06/12/13  
[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-CW-P12

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5575
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	127
Total Luminaire Watts	44
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.32
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	5138	5143	5160
55	4051	3980	3659
65	3062	2693	2671
75	2542	2157	2759
85	3364	3220	4258

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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>	2314.20	2314.20	2314.20	2314.20	2314.20
<b>2.5</b>	2301.44	2307.24	2317.68	2314.20	2318.84
<b>5.0</b>	2288.68	2303.76	2321.16	2318.84	2317.68
<b>7.5</b>	2281.72	2293.32	2306.08	2303.76	2309.56
<b>10.0</b>	2266.64	2274.76	2285.20	2288.68	2291.00
<b>12.5</b>	2239.96	2250.40	2267.80	2273.60	2274.76
<b>15.0</b>	2208.64	2223.72	2238.80	2246.92	2255.04
<b>17.5</b>	2172.68	2186.60	2204.00	2217.92	2227.20
<b>20.0</b>	2136.72	2149.48	2168.04	2186.60	2197.04
<b>22.5</b>	2086.84	2103.08	2125.12	2143.68	2157.60
<b>25.0</b>	2034.64	2047.40	2075.24	2090.32	2107.72
<b>27.5</b>	1980.12	1988.24	2017.24	2035.80	2050.88
<b>30.0</b>	1912.84	1929.08	1948.80	1970.84	1990.56
<b>32.5</b>	1838.60	1853.68	1874.56	1898.92	1918.64
<b>35.0</b>	1759.72	1771.32	1791.04	1815.40	1836.28
<b>37.5</b>	1666.92	1678.52	1695.92	1716.80	1737.68
<b>40.0</b>	1566.00	1581.08	1593.84	1606.60	1624.00
<b>42.5</b>	1462.76	1470.88	1475.52	1484.80	1492.92
<b>45.0</b>	1351.40	1354.88	1352.56	1350.24	1357.20
<b>47.5</b>	1228.44	1231.92	1228.44	1213.36	1209.88
<b>50.0</b>	1102.00	1108.96	1106.64	1070.68	1060.24
<b>52.5</b>	979.04	986.00	979.04	928.00	911.76
<b>55.0</b>	864.20	866.52	849.12	794.60	780.68
<b>57.5</b>	763.28	744.72	727.32	678.60	663.52
<b>60.0</b>	651.92	641.48	611.32	575.36	567.24
<b>62.5</b>	564.92	539.40	510.40	494.16	486.04
<b>65.0</b>	481.40	453.56	423.40	424.56	419.92
<b>67.5</b>	408.32	380.48	349.16	368.88	367.72
<b>70.0</b>	346.84	321.32	288.84	325.96	325.96
<b>72.5</b>	292.32	271.44	242.44	290.00	291.16
<b>75.0</b>	244.76	232.00	207.64	257.52	265.64
<b>77.5</b>	204.16	197.20	182.12	227.36	240.12
<b>80.0</b>	172.84	163.56	161.24	197.20	213.44
<b>82.5</b>	142.68	134.56	136.88	165.88	179.80
<b>85.0</b>	109.04	100.92	104.40	132.24	138.04
<b>87.5</b>	69.60	67.28	67.28	85.84	81.20
<b>90.0</b>	26.68	25.52	24.36	23.20	19.72
<b>92.5</b>	5.80	6.96	6.96	4.64	4.64
<b>95.0</b>	5.80	6.96	5.80	6.96	8.12
<b>97.5</b>	6.96	5.80	6.96	6.96	6.96
<b>100.0</b>	5.80	6.96	6.96	4.64	8.12
<b>102.5</b>	6.96	5.80	6.96	5.80	4.64
<b>105.0</b>	4.64	5.80	5.80	6.96	4.64
<b>107.5</b>	5.80	5.80	4.64	8.12	6.96
<b>110.0</b>	5.80	6.96	5.80	5.80	6.96
<b>112.5</b>	8.12	5.80	6.96	8.12	6.96
<b>115.0</b>	5.80	6.96	4.64	6.96	6.96
<b>117.5</b>	5.80	5.80	5.80	6.96	8.12
<b>120.0</b>	6.96	8.12	8.12	6.96	5.80
<b>122.5</b>	6.96	9.28	6.96	5.80	8.12
<b>125.0</b>	9.28	6.96	6.96	8.12	8.12
<b>127.5</b>	6.96	6.96	6.96	6.96	9.28
<b>130.0</b>	8.12	8.12	6.96	5.80	8.12
<b>132.5</b>	8.12	8.12	6.96	6.96	8.12

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**CANDELA TABULATION - (Cont.)**

<b>135.0</b>	8.12	6.96	8.12	6.96	8.12
<b>137.5</b>	8.12	8.12	6.96	8.12	8.12
<b>140.0</b>	4.64	6.96	9.28	8.12	6.96
<b>142.5</b>	8.12	9.28	5.80	9.28	8.12
<b>145.0</b>	8.12	8.12	8.12	9.28	9.28
<b>147.5</b>	8.12	8.12	6.96	8.12	5.80
<b>150.0</b>	6.96	8.12	8.12	8.12	8.12
<b>152.5</b>	6.96	9.28	8.12	9.28	5.80
<b>155.0</b>	8.12	8.12	8.12	9.28	9.28
<b>157.5</b>	8.12	10.44	10.44	8.12	9.28
<b>160.0</b>	6.96	9.28	10.44	9.28	9.28
<b>162.5</b>	8.12	9.28	8.12	10.44	11.60
<b>165.0</b>	10.44	9.28	9.28	8.12	9.28
<b>167.5</b>	8.12	9.28	10.44	9.28	8.12
<b>170.0</b>	8.12	8.12	6.96	9.28	9.28
<b>172.5</b>	8.12	9.28	9.28	9.28	9.28
<b>175.0</b>	8.12	9.28	9.28	8.12	5.80
<b>177.5</b>	9.28	8.12	8.12	8.12	11.60
<b>180.0</b>	8.12	8.12	8.12	8.12	8.12

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	850.40	N.A.	15.30
0-30	1804.15	N.A.	32.40
0-40	2921.27	N.A.	52.40
0-60	4710.09	N.A.	84.50
0-80	5408.04	N.A.	97.00
0-90	5527.94	N.A.	99.10
10-90	5308.31	N.A.	95.20
20-40	2070.87	N.A.	37.10
20-50	3110.36	N.A.	55.80
40-70	2231.38	N.A.	40.00
60-80	697.95	N.A.	12.50
70-80	255.39	N.A.	4.60
80-90	119.90	N.A.	2.20
90-110	15.89	N.A.	0.30
90-120	22.47	N.A.	0.40
90-130	29.12	N.A.	0.50
90-150	40.01	N.A.	0.70
90-180	47.45	N.A.	0.90
110-180	31.57	N.A.	0.60
0-180	5575.39	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	219.63
10-20	630.77
20-30	953.75
30-40	1117.12
40-50	1039.49
50-60	749.33
60-70	442.55
70-80	255.39
80-90	119.90
90-100	9.42
100-110	6.46
110-120	6.58
120-130	6.65
130-140	5.86
140-150	5.02
150-160	4.01
160-170	2.61
170-180	0.83

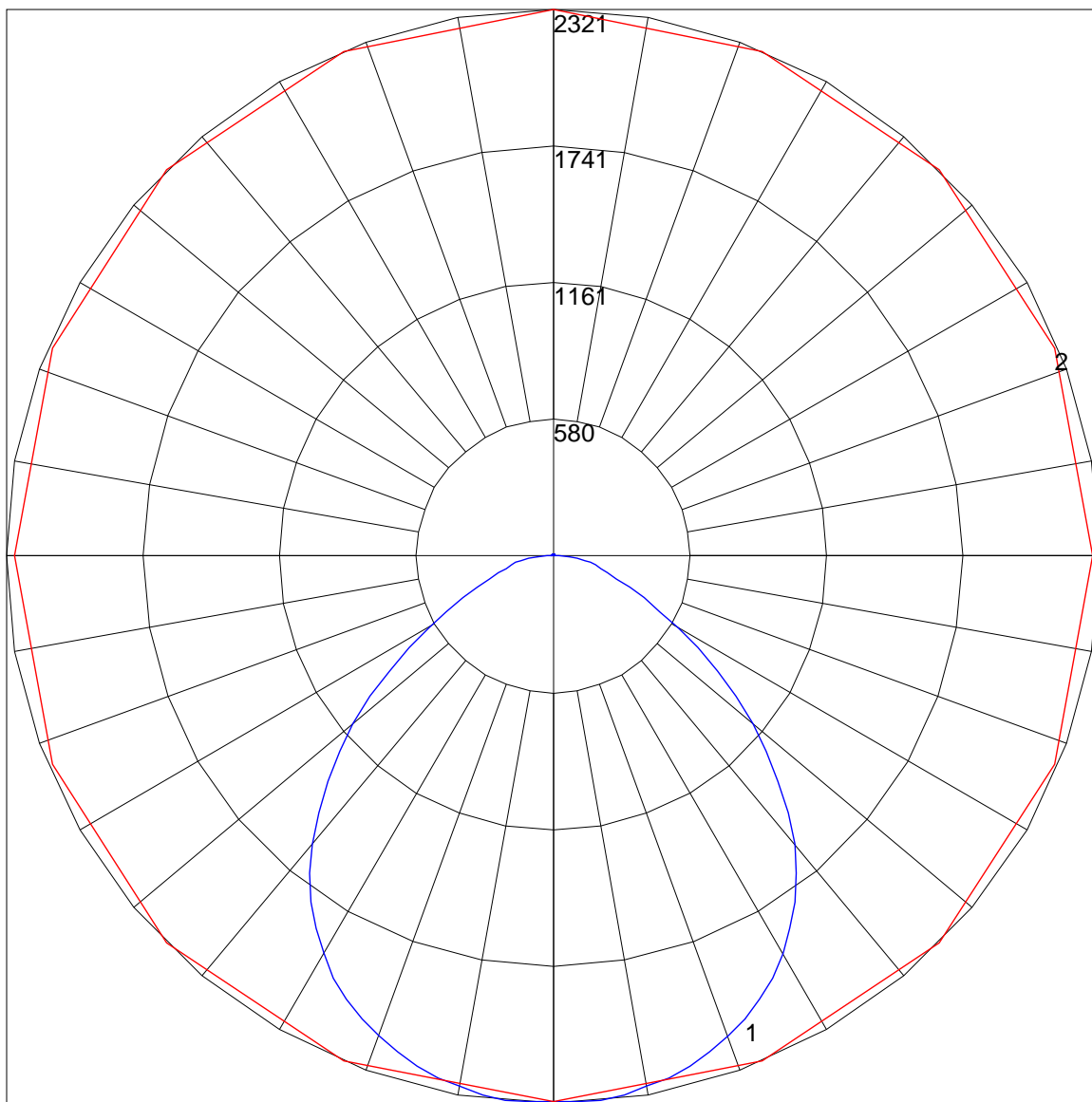
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	101	101	101	99
1	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	93	87	81	98	91	85	80	87	82	78	84	80	76	81	77	75	72
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	72	68	64	62
4	85	74	66	59	83	72	65	59	70	63	58	68	62	57	65	60	56	54
5	79	66	58	52	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	46	71	59	51	45	57	50	45	56	49	45	54	49	44	42
7	68	55	47	41	66	54	46	41	52	45	40	51	45	40	50	44	40	38
8	63	50	42	37	62	50	42	36	48	41	36	47	41	36	46	40	36	34
9	59	46	38	33	58	46	38	33	44	38	33	43	37	33	42	37	32	31
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	39	34	30	28

POLAR GRAPH



Maximum Candela = 2321.16 Located At Horizontal Angle = 45, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)