



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

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]LED-4165A  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUE]DATE]02/29/16  
[TEST]DATE]06/13/13  
[MANUFAC]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 \_SOURCETYPE] LED  
[ \_SEARCH \_APPLICATION] Indoor  
[LUMCAT]GA22-LED-VHO-NW-P12

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4832
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	110
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	4388	4393	4384
55	3480	3393	3077
65	2634	2295	2280
75	2241	1880	2374
85	3006	2934	3721

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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>	2004.48	2004.48	2004.48	2004.48	2004.48
<b>2.5</b>	1997.52	1997.52	2006.80	2011.44	2016.08
<b>5.0</b>	1992.88	1995.20	2005.64	2006.80	2005.64
<b>7.5</b>	1983.60	1990.56	1990.56	1995.20	1998.68
<b>10.0</b>	1968.52	1973.16	1977.80	1985.92	1988.24
<b>12.5</b>	1940.68	1947.64	1960.40	1969.68	1965.04
<b>15.0</b>	1920.96	1918.64	1932.56	1943.00	1951.12
<b>17.5</b>	1885.00	1891.96	1903.56	1917.48	1922.12
<b>20.0</b>	1847.88	1854.84	1869.92	1888.48	1890.80
<b>22.5</b>	1807.28	1815.40	1828.16	1851.36	1858.32
<b>25.0</b>	1760.88	1766.68	1782.92	1804.96	1813.08
<b>27.5</b>	1709.84	1715.64	1735.36	1752.76	1764.36
<b>30.0</b>	1651.84	1659.96	1673.88	1698.24	1711.00
<b>32.5</b>	1584.56	1592.68	1607.76	1634.44	1648.36
<b>35.0</b>	1511.48	1521.92	1538.16	1560.20	1577.60
<b>37.5</b>	1433.76	1440.72	1452.32	1470.88	1483.64
<b>40.0</b>	1350.24	1354.88	1364.16	1378.08	1383.88
<b>42.5</b>	1253.96	1257.44	1263.24	1266.72	1273.68
<b>45.0</b>	1154.20	1156.52	1155.36	1151.88	1153.04
<b>47.5</b>	1049.80	1053.28	1046.32	1033.56	1026.60
<b>50.0</b>	943.08	948.88	941.92	909.44	896.68
<b>52.5</b>	841.00	843.32	830.56	785.32	770.24
<b>55.0</b>	742.40	743.56	723.84	671.64	656.56
<b>57.5</b>	643.80	647.28	615.96	573.04	560.28
<b>60.0</b>	560.28	547.52	520.84	490.68	479.08
<b>62.5</b>	484.88	460.52	433.84	419.92	412.96
<b>65.0</b>	414.12	389.76	360.76	364.24	358.44
<b>67.5</b>	352.64	327.12	298.12	317.84	315.52
<b>70.0</b>	299.28	277.24	248.24	281.88	280.72
<b>72.5</b>	252.88	236.64	209.96	251.72	254.04
<b>75.0</b>	215.76	203.00	180.96	225.04	228.52
<b>77.5</b>	180.96	174.00	160.08	198.36	209.96
<b>80.0</b>	151.96	146.16	143.84	172.84	185.60
<b>82.5</b>	126.44	119.48	121.80	148.48	157.76
<b>85.0</b>	97.44	91.64	95.12	118.32	120.64
<b>87.5</b>	63.80	63.80	61.48	76.56	74.24
<b>90.0</b>	26.68	26.68	24.36	24.36	23.20
<b>92.5</b>	11.60	12.76	11.60	11.60	12.76
<b>95.0</b>	11.60	10.44	10.44	11.60	12.76
<b>97.5</b>	12.76	10.44	11.60	11.60	10.44
<b>100.0</b>	11.60	12.76	11.60	11.60	11.60
<b>102.5</b>	12.76	11.60	11.60	10.44	10.44
<b>105.0</b>	12.76	11.60	11.60	11.60	10.44
<b>107.5</b>	11.60	12.76	11.60	11.60	11.60
<b>110.0</b>	11.60	12.76	12.76	11.60	11.60
<b>112.5</b>	12.76	11.60	12.76	11.60	12.76
<b>115.0</b>	12.76	12.76	12.76	11.60	11.60
<b>117.5</b>	12.76	11.60	11.60	11.60	11.60
<b>120.0</b>	12.76	12.76	11.60	13.92	10.44
<b>122.5</b>	11.60	11.60	12.76	12.76	11.60
<b>125.0</b>	12.76	12.76	12.76	11.60	10.44
<b>127.5</b>	13.92	11.60	11.60	13.92	13.92
<b>130.0</b>	13.92	13.92	12.76	12.76	12.76
<b>132.5</b>	13.92	13.92	11.60	12.76	11.60

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**CANDELA TABULATION - (Cont.)**

<b>135.0</b>	12.76	12.76	12.76	12.76	12.76
<b>137.5</b>	12.76	13.92	13.92	12.76	10.44
<b>140.0</b>	13.92	11.60	12.76	12.76	12.76
<b>142.5</b>	13.92	12.76	13.92	12.76	11.60
<b>145.0</b>	13.92	13.92	12.76	13.92	11.60
<b>147.5</b>	13.92	13.92	13.92	12.76	12.76
<b>150.0</b>	15.08	12.76	13.92	13.92	13.92
<b>152.5</b>	13.92	13.92	13.92	13.92	12.76
<b>155.0</b>	12.76	15.08	13.92	13.92	12.76
<b>157.5</b>	13.92	13.92	13.92	13.92	15.08
<b>160.0</b>	13.92	13.92	13.92	13.92	12.76
<b>162.5</b>	13.92	13.92	13.92	13.92	12.76
<b>165.0</b>	15.08	13.92	13.92	13.92	13.92
<b>167.5</b>	15.08	13.92	15.08	15.08	15.08
<b>170.0</b>	15.08	15.08	13.92	13.92	13.92
<b>172.5</b>	13.92	13.92	13.92	13.92	13.92
<b>175.0</b>	12.76	13.92	13.92	15.08	12.76
<b>177.5</b>	13.92	12.76	13.92	12.76	13.92
<b>180.0</b>	12.76	12.76	12.76	12.76	12.76

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	735.77	N.A.	15.20
0-30	1557.88	N.A.	32.20
0-40	2517.06	N.A.	52.10
0-60	4042.61	N.A.	83.70
0-80	4644.05	N.A.	96.10
0-90	4751.81	N.A.	98.30
10-90	4561.51	N.A.	94.40
20-40	1781.29	N.A.	36.90
20-50	2668.83	N.A.	55.20
40-70	1904.26	N.A.	39.40
60-80	601.44	N.A.	12.40
70-80	222.73	N.A.	4.60
80-90	107.77	N.A.	2.20
90-110	26.85	N.A.	0.60
90-120	38.90	N.A.	0.80
90-130	50.10	N.A.	1.00
90-150	68.39	N.A.	1.40
90-180	80.14	N.A.	1.70
110-180	53.29	N.A.	1.10
0-180	4831.96	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	190.30
10-20	545.47
20-30	822.11
30-40	959.18
40-50	887.54
50-60	638.00
60-70	378.71
70-80	222.73
80-90	107.77
90-100	14.47
100-110	12.38
110-120	12.06
120-130	11.20
130-140	9.97
140-150	8.32
150-160	6.42
160-170	4.00
170-180	1.33

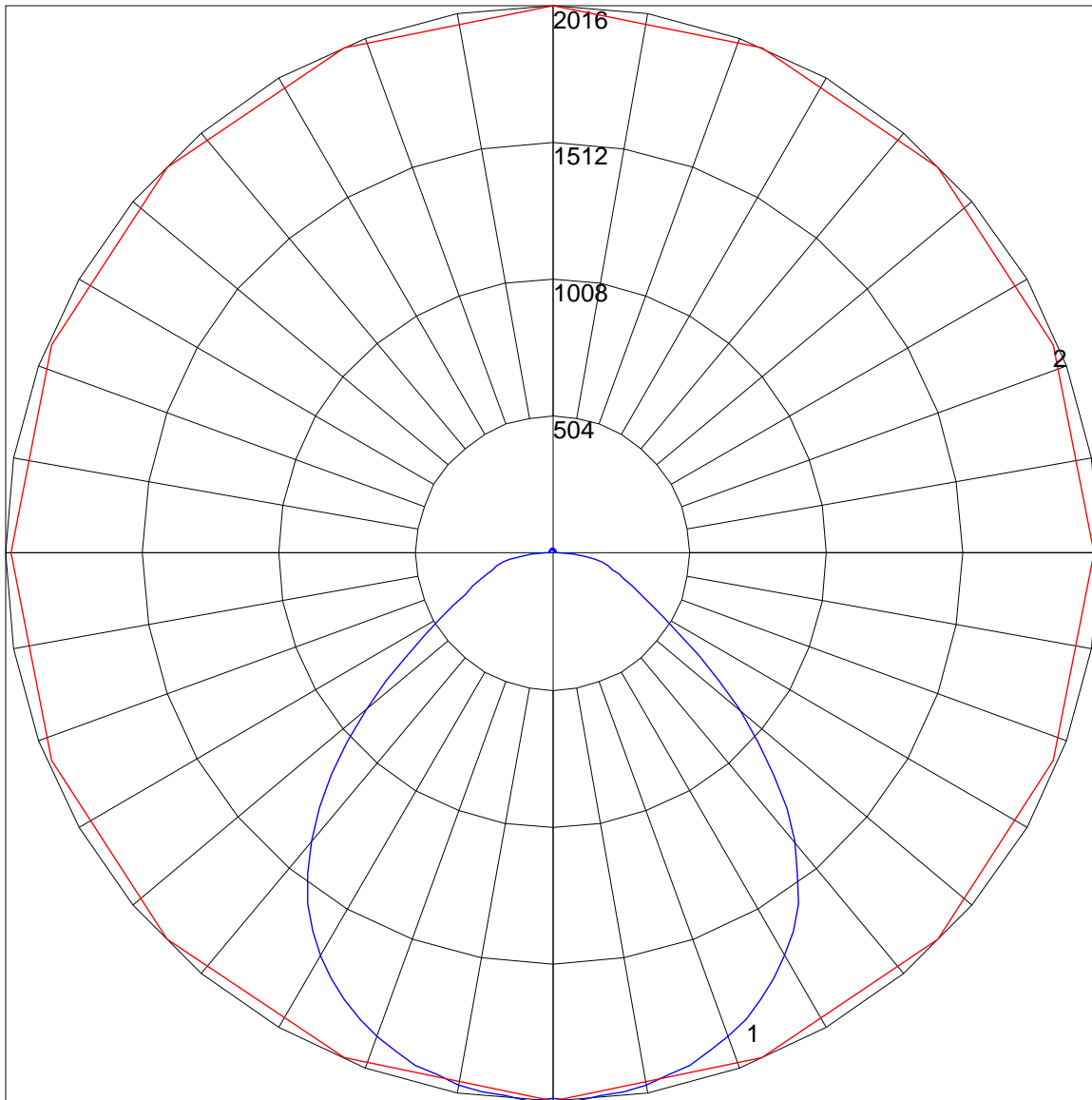
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	110	110	110	105	105	105	101	101	101	98
1	109	105	101	97	106	102	99	95	98	95	92	94	91	89	90	88	86	84
2	100	93	86	81	97	91	85	80	87	82	78	83	79	76	80	77	74	72
3	92	82	75	69	90	81	74	68	78	72	67	75	70	65	72	68	64	62
4	85	74	65	59	83	72	65	59	70	63	58	67	61	57	65	60	56	54
5	78	66	58	52	76	65	57	51	63	56	51	61	55	50	59	54	49	47
6	73	60	52	46	71	59	51	45	57	50	45	55	49	44	54	48	44	42
7	68	55	46	41	66	54	46	40	52	45	40	51	44	40	49	44	39	37
8	63	50	42	37	62	49	42	36	48	41	36	47	40	36	45	40	35	34
9	59	46	38	33	58	46	38	33	44	37	33	43	37	32	42	36	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	33	29	28

POLAR GRAPH



Maximum Candela = 2016.08 Located At Horizontal Angle = 90, Vertical Angle = 2.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)