



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : BIO-SUS-LED4-MO-AWW-D1G.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] L021507502R01  
 [TESTLAB] LIGHT LABORATORY, INC.  
 [ISSUE DATE] 3/4/2015  
 [MANUFAC] PRUDENTIAL LTG.  
 [LUMCAT] BIO-SUS-LED4-MO-AWW-D1G  
 [LUMINAIRE] 4-1/2"L. X 48"W. X 5"H. LED LUMINAIRE  
 [MORE] PRISMATIC LENS  
 [BALLASTCAT] OSRAM OPTOTRONIC  
 [BALLAST] INPUT: 120-277VAC  
 [LAMPPOSITION] 0,0  
 [LAMPCAT] N/A  
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
 [ INPUT] 120VAC  
 [ TEST PROCEDURE] IESNA:LM-79-08

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2183
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	81
Total Luminaire Watts	27
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.62
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	0.76
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.33 ft
Luminous Width (90-270)	3.94 ft
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	4569	4877	9228
55	3978	4224	6683
65	3731	3883	4914
75	2080	3616	3467
85	3089	3089	2353

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**CANDELA TABULATION**

	<b>0</b>	<b>5</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>	<b>45</b>
<b>0</b>	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75
<b>5</b>	1712.75	1712.75	1715.85	1717.40	1723.60	1731.35	1740.65	1749.95	1759.25	1767.00
<b>10</b>	1404.30	1405.85	1412.05	1422.90	1438.40	1460.10	1484.90	1514.35	1545.35	1579.45
<b>15</b>	1097.40	1098.95	1105.15	1117.55	1136.15	1160.95	1191.95	1229.15	1272.55	1322.15
<b>20</b>	863.35	866.45	871.10	881.95	897.45	917.60	945.50	979.60	1021.45	1071.05
<b>25</b>	702.15	702.15	705.25	713.00	723.85	739.35	759.50	784.30	818.40	860.25
<b>30</b>	595.20	595.20	596.75	601.40	607.60	615.35	627.75	644.80	666.50	697.50
<b>35</b>	520.80	520.80	520.80	522.35	525.45	530.10	536.30	545.60	558.00	578.15
<b>40</b>	455.70	455.70	455.70	457.25	458.80	463.45	466.55	471.20	477.40	489.80
<b>45</b>	390.60	390.60	392.15	393.70	396.80	399.90	403.00	406.10	410.75	416.95
<b>50</b>	327.05	327.05	328.60	330.15	333.25	336.35	341.00	345.65	348.75	353.40
<b>55</b>	275.90	275.90	277.45	277.45	279.00	280.55	283.65	286.75	289.85	292.95
<b>60</b>	232.50	232.50	234.05	234.05	235.60	237.15	238.70	240.25	241.80	241.80
<b>65</b>	190.65	190.65	190.65	192.20	193.75	195.30	196.85	198.40	198.40	198.40
<b>70</b>	141.05	141.05	142.60	144.15	147.25	150.35	153.45	155.00	156.55	155.00
<b>75</b>	65.10	100.75	100.75	102.30	102.30	103.85	106.95	108.50	111.60	113.15
<b>80</b>	32.55	66.65	66.65	66.65	66.65	66.65	66.65	68.20	69.75	69.75
<b>85</b>	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55
<b>90</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Vert. Angles**      **Horizontal Angles**

	<b>50</b>	<b>55</b>	<b>60</b>	<b>65</b>	<b>70</b>	<b>75</b>	<b>80</b>	<b>85</b>	<b>90</b>	<b>95</b>
<b>0</b>	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75
<b>5</b>	1774.75	1782.50	1788.70	1788.70	1787.15	1785.60	1779.40	1771.65	1760.80	1746.85
<b>10</b>	1613.55	1649.20	1683.30	1711.20	1731.35	1745.30	1748.40	1743.75	1725.15	1695.70
<b>15</b>	1379.50	1439.95	1501.95	1562.40	1615.10	1656.95	1681.75	1686.40	1666.25	1619.75
<b>20</b>	1133.05	1204.35	1284.95	1371.75	1455.45	1528.30	1577.90	1598.05	1579.45	1522.10
<b>25</b>	914.50	982.70	1064.85	1160.95	1264.80	1362.45	1438.40	1477.15	1467.85	1404.30
<b>30</b>	739.35	795.15	868.00	959.45	1064.85	1174.90	1267.90	1323.70	1326.80	1269.45
<b>35</b>	606.05	646.35	703.70	781.20	878.85	984.25	1080.35	1143.90	1159.40	1116.00
<b>40</b>	506.85	533.20	575.05	635.50	716.10	806.00	891.25	950.15	974.95	951.70
<b>45</b>	427.80	444.85	474.30	517.70	579.70	651.00	716.10	762.60	788.95	779.65
<b>50</b>	359.60	370.45	390.60	421.60	466.55	517.70	562.65	593.65	613.80	615.35
<b>55</b>	299.15	303.80	319.30	341.00	372.00	406.10	432.45	449.50	463.45	466.55
<b>60</b>	244.90	251.10	260.40	274.35	296.05	317.75	331.70	339.45	345.65	348.75
<b>65</b>	196.85	198.40	204.60	215.45	229.40	241.80	248.00	249.55	251.10	252.65
<b>70</b>	153.45	151.90	153.45	158.10	167.40	173.60	175.15	173.60	172.05	172.05
<b>75</b>	113.15	110.05	108.50	108.50	111.60	116.25	114.70	111.60	108.50	106.95
<b>80</b>	71.30	69.75	68.20	68.20	66.65	66.65	65.10	62.00	60.45	57.35
<b>85</b>	32.55	32.55	32.55	31.00	29.45	29.45	27.90	26.35	24.80	23.25
<b>90</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Vert. Angles**      **Horizontal Angles**

	<b>100</b>	<b>105</b>	<b>110</b>	<b>115</b>	<b>120</b>	<b>125</b>	<b>130</b>	<b>135</b>	<b>140</b>	<b>145</b>
<b>0</b>	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75
<b>5</b>	1728.25	1706.55	1684.85	1661.60	1635.25	1608.90	1582.55	1556.20	1531.40	1506.60
<b>10</b>	1652.30	1601.15	1543.80	1481.80	1418.25	1356.25	1297.35	1241.55	1191.95	1148.55
<b>15</b>	1550.00	1464.75	1371.75	1275.65	1182.65	1098.95	1026.10	959.45	903.65	857.15
<b>20</b>	1429.10	1315.95	1195.05	1077.25	971.85	883.50	809.10	748.65	700.60	664.95
<b>25</b>	1297.35	1164.05	1029.20	903.65	799.80	717.65	652.55	602.95	565.75	539.40
<b>30</b>	1157.85	1018.35	880.40	759.50	661.85	590.55	539.40	502.20	477.40	458.80
<b>35</b>	1016.80	881.95	750.20	637.05	554.90	496.00	455.70	429.35	409.20	393.70

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**CANDELA TABULATION - (Cont.)**

<b>40</b>	871.10	753.30	635.50	536.30	466.55	420.05	387.50	365.80	347.20	330.15
<b>45</b>	725.40	632.40	531.65	449.50	392.15	353.40	327.05	305.35	282.10	269.70
<b>50</b>	582.80	516.15	438.65	372.00	325.50	286.75	269.70	248.00	230.95	217.00
<b>55</b>	449.50	407.65	351.85	302.25	257.30	237.15	215.45	196.85	182.90	168.95
<b>60</b>	339.45	314.65	277.45	241.80	210.80	187.55	170.50	155.00	141.05	130.20
<b>65</b>	246.45	232.50	209.25	182.90	161.20	144.15	128.65	116.25	108.50	100.75
<b>70</b>	167.40	159.65	145.70	128.65	114.70	102.30	93.00	86.80	80.60	75.95
<b>75</b>	105.40	100.75	93.00	83.70	75.95	69.75	65.10	60.45	57.35	54.25
<b>80</b>	55.80	54.25	51.15	49.60	46.50	43.40	41.85	40.30	38.75	37.20
<b>85</b>	23.25	23.25	23.25	23.25	23.25	21.70	21.70	21.70	20.15	20.15
<b>90</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Vert. Angles**      **Horizontal Angles**

	<b>150</b>	<b>155</b>	<b>160</b>	<b>165</b>	<b>170</b>	<b>175</b>	<b>180</b>
<b>0</b>	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75	1774.75
<b>5</b>	1486.45	1467.85	1453.90	1441.50	1432.20	1427.55	1426.00
<b>10</b>	1111.35	1080.35	1055.55	1035.40	1019.90	1013.70	1010.60
<b>15</b>	819.95	790.50	767.25	748.65	736.25	730.05	728.50
<b>20</b>	633.95	610.70	593.65	581.25	573.50	570.40	568.85
<b>25</b>	520.80	505.30	496.00	488.25	482.05	480.50	480.50
<b>30</b>	444.85	434.00	426.25	418.50	413.85	412.30	412.30
<b>35</b>	381.30	368.90	359.60	351.85	347.20	344.10	344.10
<b>40</b>	316.20	305.35	292.95	286.75	282.10	279.00	279.00
<b>45</b>	257.30	244.90	235.60	229.40	224.75	221.65	221.65
<b>50</b>	204.60	193.75	186.00	179.80	175.15	172.05	172.05
<b>55</b>	158.10	148.80	142.60	137.95	134.85	133.30	133.30
<b>60</b>	122.45	116.25	113.15	110.05	108.50	106.95	106.95
<b>65</b>	96.10	91.45	88.35	86.80	85.25	83.70	83.70
<b>70</b>	72.85	69.75	68.20	66.65	65.10	65.10	65.10
<b>75</b>	52.70	51.15	49.60	48.05	48.05	48.05	48.05
<b>80</b>	35.65	34.10	34.10	34.10	32.55	32.55	32.55
<b>85</b>	20.15	20.15	20.15	20.15	20.15	20.15	20.15
<b>90</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	493.34	N.A.	22.60
0-30	894.26	N.A.	41.00
0-40	1287.52	N.A.	59.00
0-60	1883.5	N.A.	86.30
0-80	2153.95	N.A.	98.70
0-90	2183.15	N.A.	100.00
10-90	2031.12	N.A.	93.00
20-40	794.18	N.A.	36.40
20-50	1132.98	N.A.	51.90
40-70	771.31	N.A.	35.30
60-80	270.45	N.A.	12.40
70-80	95.12	N.A.	4.40
80-90	29.20	N.A.	1.30
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	2183.15	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	152.02
10-20	341.32
20-30	400.92
30-40	393.26
40-50	338.80
50-60	257.17
60-70	175.33
70-80	95.12
80-90	29.20
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

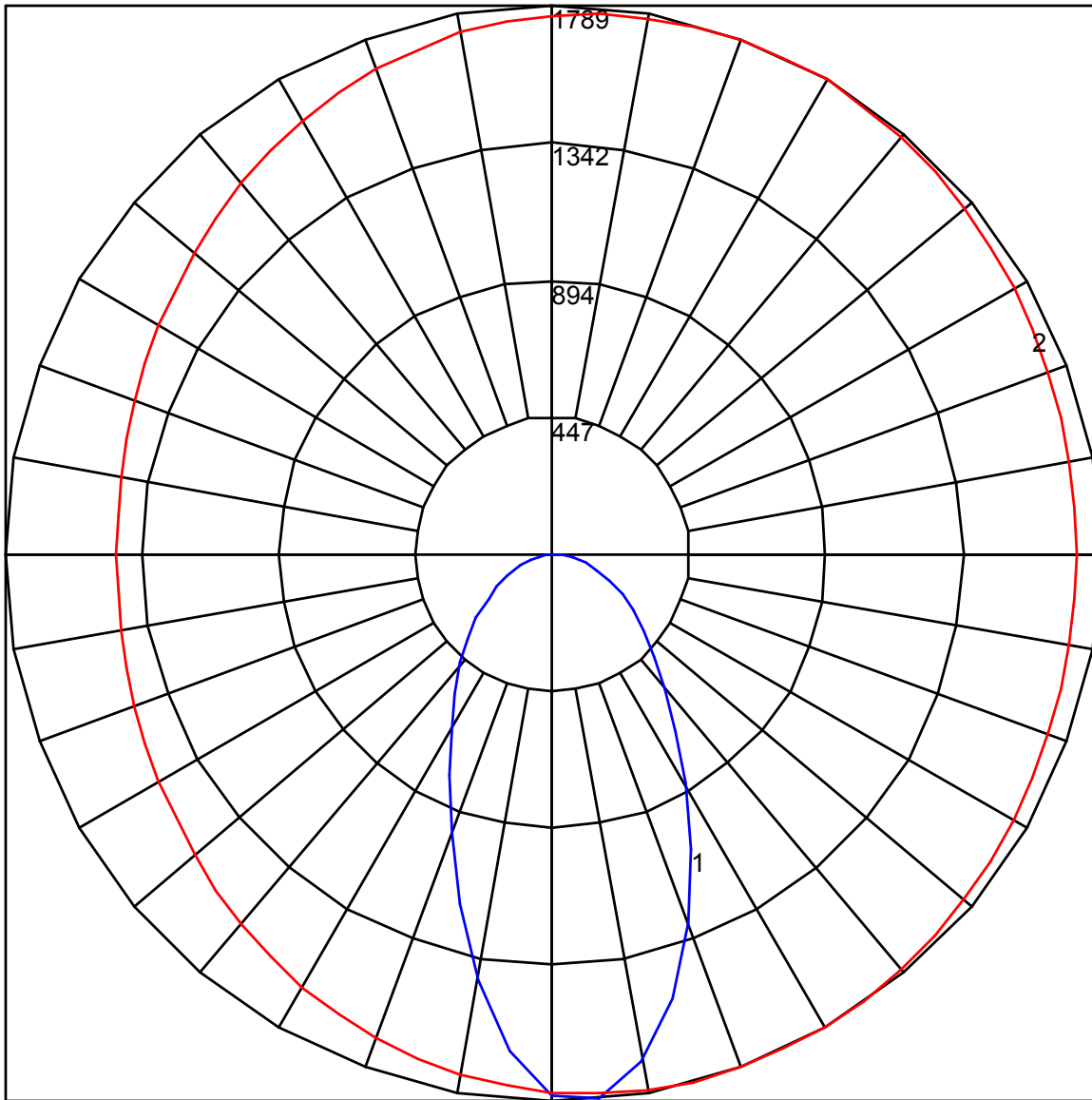
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87
2	102	95	89	84	99	93	88	83	89	85	81	86	83	79	83	80	77	76
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	45	43
8	67	55	47	42	65	54	47	42	53	46	41	51	45	41	50	45	41	39
9	63	51	43	38	62	50	43	38	49	43	38	48	42	38	47	42	38	36
10	59	47	40	35	58	47	40	35	46	40	35	45	39	35	44	39	35	33

POLAR GRAPH



Maximum Candela = 1788.7 Located At Horizontal Angle = 60, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (60 - 240) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)