



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : ZUS-PRO-33-LED4-LO.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] L101409101  
 [TESTLAB]  
 [ISSUEDATE]  
 [MANUFAC] PRUDENTIAL LTG.  
 [LUMCAT] ZDS-33-LED4-LO  
 [LUMINAIRE] 26"SQ. X 3"H. LED LUMINAIRE  
 [MORE] DIFFUSED 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	6529
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	139
Total Luminaire Watts	47
Ballast Factor	1.00
CIE Type	Semi-Indirect
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	2.17 ft
Luminous Width (90-270)	2.17 ft
Luminous Height	0.10 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	267	327	263
55	369	471	369
65	561	742	598
75	904	1133	996
85	2478	2511	1852

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**CANDELA TABULATION**

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
<b>0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>5</b>	31.92	31.92	31.92	31.92	31.92	31.92	30.40	30.40	30.40	30.40
<b>10</b>	36.48	36.48	38.00	38.00	38.00	38.00	36.48	36.48	36.48	36.48
<b>15</b>	44.08	44.08	44.08	44.08	45.60	45.60	45.60	45.60	45.60	45.60
<b>20</b>	50.16	50.16	50.16	51.68	51.68	53.20	54.72	54.72	56.24	56.24
<b>25</b>	56.24	57.76	57.76	59.28	60.80	62.32	62.32	62.32	63.84	63.84
<b>30</b>	63.84	63.84	65.36	68.40	69.92	71.44	72.96	72.96	72.96	72.96
<b>35</b>	72.96	74.48	76.00	77.52	79.04	82.08	83.60	83.60	85.12	85.12
<b>40</b>	79.04	80.56	82.08	86.64	89.68	92.72	94.24	95.76	97.28	98.80
<b>45</b>	86.64	88.16	91.20	94.24	97.28	100.32	104.88	107.92	109.44	107.92
<b>50</b>	91.20	92.72	95.76	100.32	104.88	109.44	112.48	115.52	117.04	118.56
<b>55</b>	98.80	100.32	103.36	107.92	112.48	118.56	123.12	126.16	127.68	129.20
<b>60</b>	109.44	110.96	115.52	120.08	124.64	129.20	133.76	138.32	141.36	141.36
<b>65</b>	114.00	115.52	121.60	129.20	135.28	142.88	147.44	152.00	155.04	156.56
<b>70</b>	94.24	97.28	104.88	114.00	124.64	135.28	145.92	155.04	162.64	165.68
<b>75</b>	120.08	123.12	127.68	133.76	141.36	145.92	150.48	152.00	153.52	159.60
<b>80</b>	155.04	155.04	159.60	165.68	171.76	177.84	182.40	185.44	186.96	182.40
<b>85</b>	144.40	145.92	148.96	155.04	161.12	165.68	170.24	171.76	170.24	167.20
<b>90</b>	133.76	135.28	139.84	147.44	155.04	161.12	167.20	173.28	174.80	174.80
<b>95</b>	281.20	284.24	290.32	297.92	307.04	316.16	323.76	329.84	332.88	332.88
<b>100</b>	380.00	384.56	395.20	405.84	418.00	430.16	439.28	445.36	449.92	448.40
<b>105</b>	498.56	503.12	513.76	524.40	536.56	547.20	554.80	560.88	563.92	562.40
<b>110</b>	630.80	633.84	644.48	653.60	662.72	670.32	676.40	680.96	682.48	679.44
<b>115</b>	763.04	766.08	775.20	782.80	790.40	794.96	796.48	798.00	796.48	793.44
<b>120</b>	890.72	892.24	901.36	905.92	908.96	908.96	908.96	907.44	904.40	901.36
<b>125</b>	995.60	997.12	1003.20	1006.24	1006.24	1004.72	1000.16	997.12	992.56	991.04
<b>130</b>	1102.00	1102.00	1106.56	1108.08	1108.08	1103.52	1098.96	1094.40	1089.84	1086.80
<b>135</b>	1203.84	1203.84	1208.40	1208.40	1206.88	1202.32	1196.24	1193.20	1188.64	1185.60
<b>140</b>	1304.16	1305.68	1307.20	1308.72	1307.20	1302.64	1299.60	1296.56	1292.00	1292.00
<b>145</b>	1406.00	1407.52	1410.56	1412.08	1412.08	1410.56	1407.52	1406.00	1404.48	1404.48
<b>150</b>	1515.44	1515.44	1516.96	1520.00	1521.52	1523.04	1521.52	1523.04	1521.52	1521.52
<b>155</b>	1626.40	1626.40	1627.92	1630.96	1634.00	1635.52	1635.52	1637.04	1637.04	1637.04
<b>160</b>	1735.84	1734.32	1734.32	1734.32	1737.36	1740.40	1741.92	1741.92	1741.92	1743.44
<b>165</b>	1822.48	1824.00	1822.48	1822.48	1827.04	1830.08	1830.08	1830.08	1830.08	1830.08
<b>170</b>	1886.32	1884.80	1886.32	1886.32	1887.84	1887.84	1886.32	1886.32	1886.32	1887.84
<b>175</b>	1919.76	1919.76	1919.76	1919.76	1921.28	1921.28	1919.76	1918.24	1918.24	1918.24
<b>180</b>	1928.88	1928.88	1928.88	1928.88	1928.88	1928.88	1928.88	1928.88	1928.88	1928.88

**Vert.  
Angles**

**Horizontal Angles**

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>
<b>0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>5</b>	30.40	30.40	30.40	31.92	31.92	31.92	31.92	31.92	31.92
<b>10</b>	36.48	36.48	36.48	36.48	36.48	36.48	36.48	36.48	36.48
<b>15</b>	45.60	45.60	45.60	45.60	44.08	44.08	44.08	44.08	42.56
<b>20</b>	56.24	54.72	54.72	53.20	51.68	51.68	50.16	50.16	48.64
<b>25</b>	63.84	62.32	62.32	60.80	60.80	59.28	57.76	56.24	56.24
<b>30</b>	72.96	72.96	71.44	69.92	69.92	66.88	65.36	63.84	63.84
<b>35</b>	85.12	83.60	83.60	80.56	79.04	77.52	74.48	72.96	71.44
<b>40</b>	97.28	95.76	94.24	92.72	89.68	85.12	82.08	79.04	77.52
<b>45</b>	109.44	107.92	104.88	101.84	97.28	92.72	89.68	86.64	85.12
<b>50</b>	118.56	117.04	114.00	110.96	104.88	100.32	95.76	92.72	89.68
<b>55</b>	129.20	127.68	124.64	120.08	115.52	109.44	104.88	100.32	98.80
<b>60</b>	141.36	139.84	135.28	132.24	127.68	121.60	117.04	112.48	110.96

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**CANDELA TABULATION - (Cont.)**

<b>65</b>	156.56	155.04	152.00	147.44	141.36	133.76	127.68	123.12	121.60
<b>70</b>	165.68	165.68	162.64	156.56	148.96	141.36	133.76	127.68	126.16
<b>75</b>	164.16	168.72	165.68	161.12	153.52	145.92	138.32	133.76	132.24
<b>80</b>	176.32	168.72	162.64	159.60	156.56	150.48	145.92	141.36	139.84
<b>85</b>	161.12	153.52	144.40	136.80	129.20	121.60	114.00	109.44	107.92
<b>90</b>	173.28	168.72	162.64	153.52	145.92	136.80	129.20	124.64	123.12
<b>95</b>	328.32	320.72	311.60	299.44	287.28	275.12	264.48	256.88	253.84
<b>100</b>	443.84	434.72	422.56	408.88	393.68	378.48	363.28	352.64	348.08
<b>105</b>	557.84	548.72	536.56	522.88	507.68	492.48	478.80	466.64	462.08
<b>110</b>	674.88	667.28	656.64	646.00	633.84	620.16	608.00	595.84	591.28
<b>115</b>	790.40	784.32	778.24	770.64	761.52	750.88	740.24	729.60	726.56
<b>120</b>	898.32	895.28	892.24	889.20	884.64	878.56	870.96	861.84	860.32
<b>125</b>	989.52	988.00	988.00	988.00	988.00	984.96	980.40	972.80	971.28
<b>130</b>	1086.80	1088.32	1091.36	1094.40	1095.92	1095.92	1092.88	1088.32	1086.80
<b>135</b>	1187.12	1190.16	1194.72	1197.76	1202.32	1203.84	1202.32	1199.28	1199.28
<b>140</b>	1293.52	1295.04	1299.60	1304.16	1307.20	1310.24	1308.72	1307.20	1307.20
<b>145</b>	1406.00	1409.04	1410.56	1415.12	1416.64	1416.64	1415.12	1413.60	1413.60
<b>150</b>	1523.04	1526.08	1526.08	1527.60	1529.12	1526.08	1523.04	1521.52	1523.04
<b>155</b>	1638.56	1640.08	1640.08	1638.56	1638.56	1635.52	1635.52	1634.00	1634.00
<b>160</b>	1743.44	1743.44	1744.96	1743.44	1740.40	1737.36	1738.88	1740.40	1741.92
<b>165</b>	1830.08	1830.08	1831.60	1831.60	1828.56	1827.04	1825.52	1825.52	1825.52
<b>170</b>	1886.32	1887.84	1887.84	1889.36	1889.36	1889.36	1889.36	1887.84	1887.84
<b>175</b>	1918.24	1919.76	1921.28	1922.80	1922.80	1921.28	1921.28	1921.28	1921.28
<b>180</b>	1928.88	1928.88	1928.88	1928.88	1928.88	1928.88	1928.88	1928.88	1928.88

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	15.71	N.A.	0.20
0-30	44.04	N.A.	0.70
0-40	94.24	N.A.	1.40
0-60	274.87	N.A.	4.20
0-80	569.00	N.A.	8.70
0-90	736.18	N.A.	11.30
10-90	733.36	N.A.	11.20
20-40	78.53	N.A.	1.20
20-50	154.81	N.A.	2.40
40-70	316.24	N.A.	4.80
60-80	294.13	N.A.	4.50
70-80	158.53	N.A.	2.40
80-90	167.18	N.A.	2.60
90-110	875.23	N.A.	13.40
90-120	1641.53	N.A.	25.10
90-130	2531.52	N.A.	38.80
90-150	4342.71	N.A.	66.50
90-180	5792.98	N.A.	88.70
110-180	4917.75	N.A.	75.30
0-180	6529.15	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	2.81
10-20	12.90
20-30	28.33
30-40	50.20
40-50	76.28
50-60	104.35
60-70	135.60
70-80	158.53
80-90	167.18
90-100	317.71
100-110	557.52
110-120	766.30
120-130	889.99
130-140	926.67
140-150	884.52
150-160	753.61
160-170	514.43
170-180	182.23

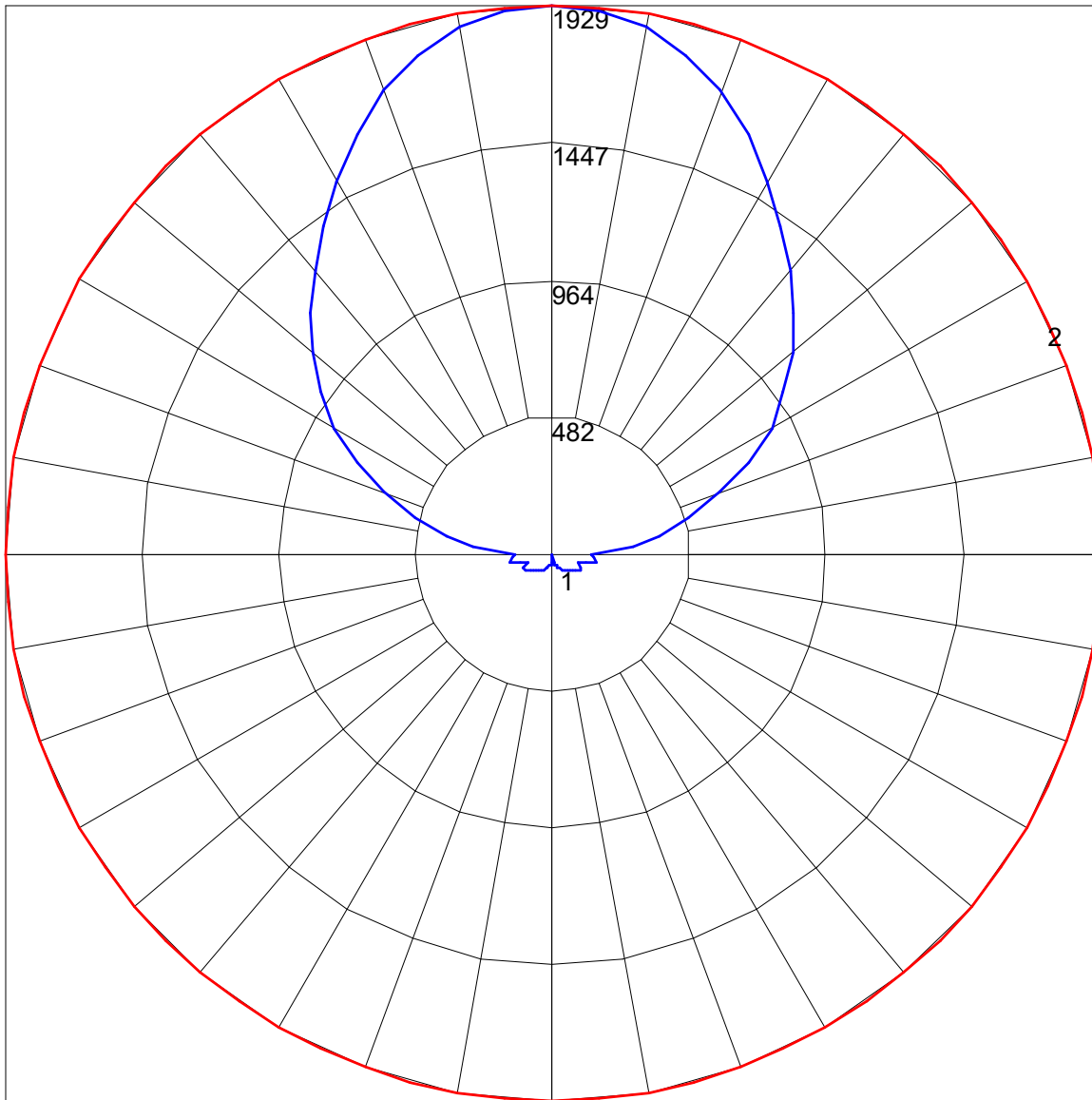
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	98	98	98	98	85	85	85	85	62	62	62	40	40	40	21	21	21	11
1	88	83	79	75	76	72	69	66	52	50	48	33	32	31	16	15	15	7
2	79	72	66	60	69	62	57	53	45	41	38	28	26	25	13	12	11	5
3	72	63	55	49	62	54	48	43	39	35	32	25	22	20	11	10	9	3
4	66	55	47	41	57	48	41	36	34	30	26	22	19	17	10	9	7	3
5	60	49	41	35	52	42	36	31	30	26	22	19	16	14	9	7	6	2
6	55	43	35	30	47	38	31	26	27	22	19	17	14	12	8	6	5	2
7	50	39	31	26	44	34	27	22	24	20	16	15	13	10	7	6	5	1
8	47	35	27	22	40	30	24	20	22	17	14	14	11	9	6	5	4	1
9	43	31	24	19	37	27	21	17	20	15	12	13	10	8	6	4	3	1
10	40	29	22	17	35	25	19	15	18	14	11	11	9	7	5	4	3	1

POLAR GRAPH



Maximum Candela = 1928.88 Located At Horizontal Angle = 0, Vertical Angle = 180  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (180) (Through Max. Cd.)