



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : ZDS-PRO-44-LED4-MO.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] L101403501  
 [TESTLAB] LIGHT LABORATORY, INC.  
 [ISSUE DATE] 10/20/2014  
 [MANUFAC] PRUDENTIAL LTG.  
 [LUMCAT] ZDS-44-LED4-MO  
 [LUMINAIRE] 38"SQ. X 3"H. LED LUMINAIRE  
 [MORE] DIFFUSED LENS  
 [BALLASTCAT] OSRAM OPTOTRONIC  
 [BALLAST] INPUT: 120-277VAC, 0.52-0.24A,  
 [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	13746
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
Total Luminaire Watts	104
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.32
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	7825	7568	7795
55	7830	7600	7639
65	7900	7920	7522
75	7902	8403	7324
85	10160	10524	9172

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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>	4060.8	4060.8	4060.8	4060.8	4060.8	4060.8	4060.8	4060.8	4060.8	4060.8
<b>5</b>	4041.6	4041.6	4041.6	4041.6	4044.8	4044.8	4041.6	4038.4	4038.4	4038.4
<b>10</b>	3971.2	3968.0	3971.2	3971.2	3974.4	3974.4	3971.2	3971.2	3971.2	3974.4
<b>15</b>	3836.8	3840.0	3836.8	3836.8	3846.4	3852.8	3852.8	3852.8	3852.8	3852.8
<b>20</b>	3654.4	3651.2	3651.2	3651.2	3657.6	3664.0	3667.2	3667.2	3667.2	3670.4
<b>25</b>	3424.0	3424.0	3427.2	3433.6	3440.0	3443.2	3443.2	3446.4	3446.4	3446.4
<b>30</b>	3190.4	3190.4	3193.6	3200.0	3203.2	3206.4	3203.2	3206.4	3203.2	3203.2
<b>35</b>	2960.0	2963.2	2969.6	2972.8	2972.8	2969.6	2963.2	2960.0	2956.8	2956.8
<b>40</b>	2745.6	2748.8	2752.0	2755.2	2752.0	2742.4	2736.0	2729.6	2720.0	2720.0
<b>45</b>	2534.4	2534.4	2544.0	2544.0	2540.8	2531.2	2518.4	2512.0	2502.4	2496.0
<b>50</b>	2320.0	2320.0	2329.6	2332.8	2332.8	2323.2	2313.6	2304.0	2294.4	2288.0
<b>55</b>	2096.0	2099.2	2112.0	2118.4	2118.4	2115.2	2105.6	2099.2	2089.6	2086.4
<b>60</b>	1875.2	1878.4	1897.6	1907.2	1913.6	1913.6	1913.6	1910.4	1904.0	1897.6
<b>65</b>	1606.4	1612.8	1632.0	1648.0	1664.0	1673.6	1676.8	1680.0	1676.8	1670.4
<b>70</b>	1328.0	1334.4	1356.8	1376.0	1395.2	1411.2	1424.0	1433.6	1436.8	1430.4
<b>75</b>	1049.6	1059.2	1081.6	1104.0	1129.6	1152.0	1168.0	1180.8	1187.2	1184.0
<b>80</b>	800.0	809.6	832.0	854.4	880.0	905.6	924.8	937.6	947.2	944.0
<b>85</b>	592.0	598.4	611.2	627.2	646.4	665.6	681.6	694.4	700.8	700.8
<b>90</b>	281.6	284.8	294.4	310.4	326.4	339.2	352.0	364.8	368.0	368.0
<b>95</b>	304.0	307.2	313.6	326.4	339.2	348.8	358.4	361.6	358.4	352.0
<b>100</b>	326.4	326.4	336.0	348.8	361.6	374.4	384.0	390.4	393.6	384.0
<b>105</b>	252.8	259.2	268.8	281.6	297.6	307.2	316.8	320.0	323.2	336.0
<b>110</b>	198.4	204.8	220.8	240.0	262.4	284.8	307.2	326.4	342.4	348.8
<b>115</b>	240.0	243.2	256.0	272.0	284.8	300.8	310.4	320.0	326.4	329.6
<b>120</b>	230.4	233.6	243.2	252.8	262.4	272.0	281.6	291.2	297.6	297.6
<b>125</b>	208.0	211.2	217.6	227.2	236.8	249.6	259.2	265.6	268.8	272.0
<b>130</b>	192.0	195.2	201.6	211.2	220.8	230.4	236.8	243.2	246.4	249.6
<b>135</b>	182.4	185.6	192.0	198.4	204.8	211.2	220.8	227.2	230.4	227.2
<b>140</b>	166.4	169.6	172.8	182.4	188.8	195.2	198.4	201.6	204.8	208.0
<b>145</b>	153.6	156.8	160.0	163.2	166.4	172.8	176.0	176.0	179.2	179.2
<b>150</b>	134.4	134.4	137.6	144.0	147.2	150.4	153.6	153.6	153.6	153.6
<b>155</b>	118.4	121.6	121.6	124.8	128.0	131.2	131.2	131.2	134.4	134.4
<b>160</b>	105.6	105.6	105.6	108.8	108.8	112.0	115.2	115.2	118.4	118.4
<b>165</b>	92.8	92.8	92.8	92.8	96.0	96.0	96.0	96.0	96.0	96.0
<b>170</b>	76.8	76.8	80.0	80.0	80.0	80.0	76.8	76.8	76.8	76.8
<b>175</b>	67.2	67.2	67.2	67.2	67.2	67.2	64.0	64.0	64.0	64.0
<b>180</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**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>	4060.8	4060.8	4060.8	4060.8	4060.8	4060.8	4060.8	4060.8	4060.8
<b>5</b>	4038.4	4041.6	4044.8	4048.0	4048.0	4044.8	4044.8	4044.8	4044.8
<b>10</b>	3971.2	3974.4	3974.4	3977.6	3977.6	3977.6	3977.6	3974.4	3974.4
<b>15</b>	3852.8	3852.8	3856.0	3856.0	3849.6	3846.4	3843.2	3843.2	3843.2
<b>20</b>	3670.4	3670.4	3673.6	3670.4	3664.0	3657.6	3660.8	3664.0	3667.2
<b>25</b>	3449.6	3452.8	3452.8	3449.6	3449.6	3443.2	3443.2	3440.0	3440.0
<b>30</b>	3206.4	3212.8	3212.8	3216.0	3219.2	3212.8	3206.4	3203.2	3206.4
<b>35</b>	2960.0	2966.4	2969.6	2979.2	2982.4	2982.4	2979.2	2976.0	2976.0
<b>40</b>	2723.2	2726.4	2736.0	2745.6	2752.0	2758.4	2755.2	2752.0	2752.0
<b>45</b>	2499.2	2505.6	2515.2	2521.6	2531.2	2534.4	2531.2	2524.8	2524.8
<b>50</b>	2288.0	2291.2	2297.6	2304.0	2307.2	2307.2	2300.8	2291.2	2288.0
<b>55</b>	2083.2	2080.0	2080.0	2080.0	2080.0	2073.6	2064.0	2048.0	2044.8
<b>60</b>	1891.2	1884.8	1878.4	1872.0	1862.4	1849.6	1833.6	1814.4	1811.2

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**CANDELA TABULATION - (Cont.)**

<b>65</b>	1664.0	1651.2	1638.4	1622.4	1603.2	1580.8	1558.4	1536.0	1529.6
<b>70</b>	1420.8	1404.8	1382.4	1360.0	1334.4	1305.6	1280.0	1254.4	1244.8
<b>75</b>	1174.4	1155.2	1129.6	1100.8	1068.8	1036.8	1008.0	982.4	972.8
<b>80</b>	934.4	915.2	889.6	860.8	828.8	796.8	764.8	742.4	732.8
<b>85</b>	691.2	675.2	656.0	630.4	604.8	579.2	556.8	540.8	534.4
<b>90</b>	364.8	355.2	342.4	323.2	307.2	288.0	272.0	262.4	259.2
<b>95</b>	339.2	323.2	304.0	288.0	272.0	256.0	240.0	230.4	227.2
<b>100</b>	371.2	355.2	342.4	336.0	329.6	316.8	307.2	297.6	294.4
<b>105</b>	345.6	355.2	348.8	339.2	323.2	307.2	291.2	281.6	278.4
<b>110</b>	348.8	348.8	342.4	329.6	313.6	297.6	281.6	268.8	265.6
<b>115</b>	329.6	326.4	320.0	310.4	297.6	281.6	268.8	259.2	256.0
<b>120</b>	297.6	294.4	284.8	278.4	268.8	256.0	246.4	236.8	233.6
<b>125</b>	272.0	268.8	262.4	252.8	243.2	230.4	220.8	211.2	208.0
<b>130</b>	249.6	246.4	240.0	233.6	220.8	211.2	201.6	195.2	188.8
<b>135</b>	230.4	227.2	220.8	214.4	204.8	195.2	188.8	182.4	179.2
<b>140</b>	204.8	201.6	198.4	195.2	188.8	179.2	172.8	166.4	163.2
<b>145</b>	179.2	176.0	176.0	169.6	166.4	163.2	156.8	153.6	150.4
<b>150</b>	153.6	153.6	150.4	147.2	147.2	140.8	137.6	134.4	134.4
<b>155</b>	134.4	131.2	131.2	128.0	128.0	124.8	121.6	118.4	118.4
<b>160</b>	118.4	115.2	115.2	112.0	108.8	108.8	105.6	105.6	102.4
<b>165</b>	96.0	96.0	96.0	96.0	92.8	92.8	92.8	92.8	89.6
<b>170</b>	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8	76.8
<b>175</b>	64.0	64.0	64.0	67.2	67.2	67.2	67.2	67.2	67.2
<b>180</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1466.65	N.A.	10.70
0-30	3053.2	N.A.	22.20
0-40	4915.34	N.A.	35.80
0-60	8739.89	N.A.	63.60
0-80	11526.88	N.A.	83.90
0-90	12195.74	N.A.	88.70
10-90	11812.1	N.A.	85.90
20-40	3448.69	N.A.	25.10
20-50	5399.58	N.A.	39.30
40-70	5437.81	N.A.	39.60
60-80	2786.99	N.A.	20.30
70-80	1173.73	N.A.	8.50
80-90	668.86	N.A.	4.90
90-110	685.69	N.A.	5.00
90-120	971.16	N.A.	7.10
90-130	1190.86	N.A.	8.70
90-150	1457.13	N.A.	10.60
90-180	1549.84	N.A.	11.30
110-180	864.16	N.A.	6.30
0-180	13745.59	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	383.65
10-20	1083.01
20-30	1586.54
30-40	1862.15
40-50	1950.89
50-60	1873.66
60-70	1613.25
70-80	1173.73
80-90	668.86
90-100	351.95
100-110	333.74
110-120	285.48
120-130	219.69
130-140	160.59
140-150	105.69
150-160	59.63
160-170	27.15
170-180	5.92

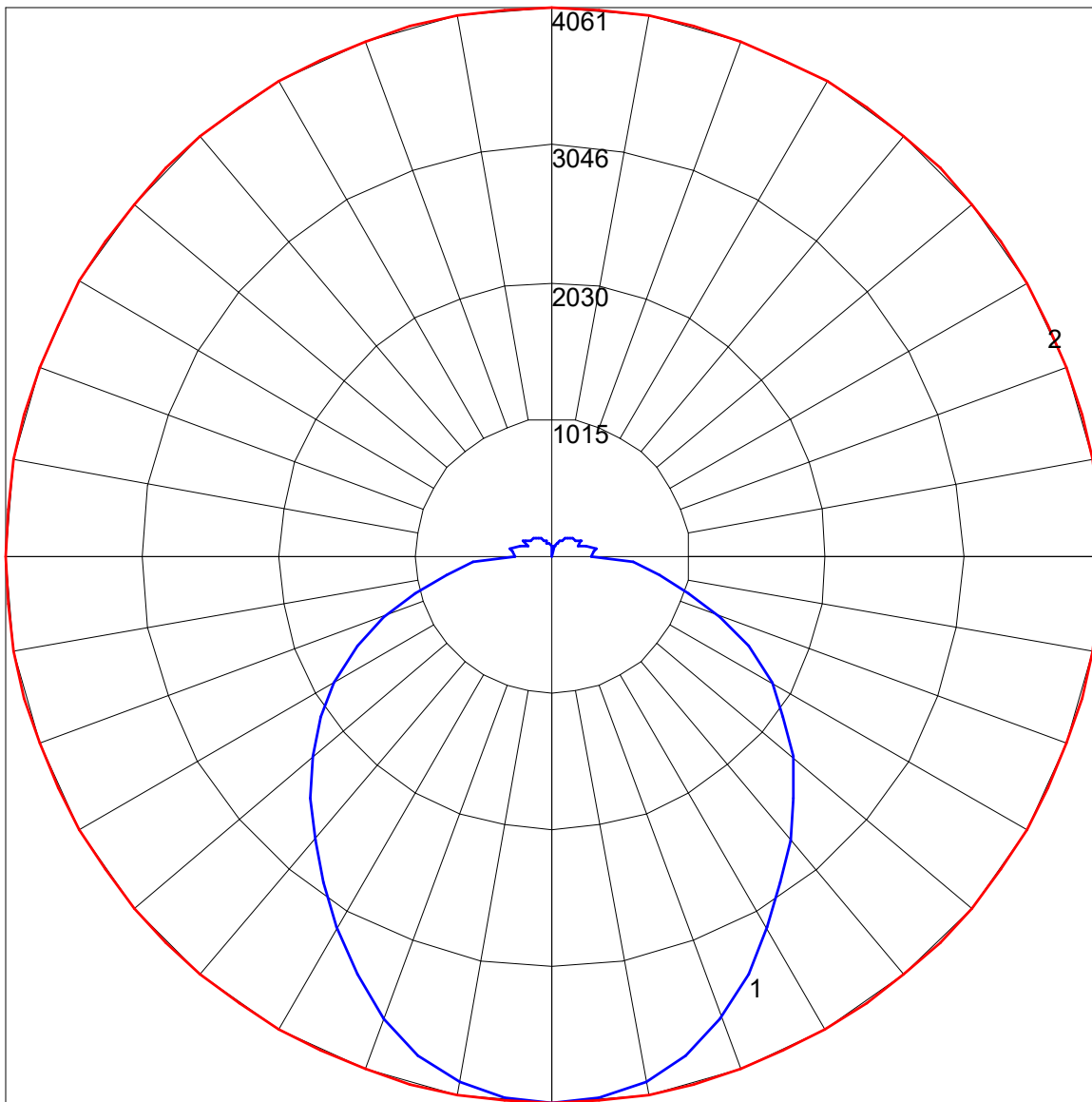
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	104	99	94	90	101	96	91	87	89	86	82	83	81	78	78	76	74	71
2	94	85	78	72	91	83	76	70	77	72	67	72	68	64	67	64	60	58
3	86	75	66	59	82	72	64	58	67	61	55	63	58	53	59	55	51	48
4	78	66	57	50	75	64	55	49	60	53	47	56	50	45	53	47	43	41
5	72	59	49	43	69	57	48	42	53	46	40	50	44	39	47	42	37	35
6	66	53	44	37	64	51	43	36	48	41	35	45	39	34	43	37	33	30
7	61	48	39	33	59	46	38	32	44	36	31	41	35	30	39	33	29	27
8	57	43	35	29	55	42	34	29	40	33	28	38	31	27	36	30	26	24
9	53	40	32	26	51	39	31	26	37	30	25	35	29	24	33	28	23	22
10	50	37	29	24	48	36	28	23	34	27	23	32	26	22	31	25	21	20

POLAR GRAPH



Maximum Candela = 4060.8 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)