



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : ZDS-PRO-33-LED4-MO.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] L101403501  
 [TESTLAB] LIGHT LABORATORY, INC.  
 [ISSUEDATE] 10/20/2014  
 [MANUFAC] PRUDENTIAL LTG.  
 [LUMCAT] ZDS-33-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	10309
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
Total Luminaire Watts	78
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	5869	5676	5846
55	5873	5700	5729
65	5925	5940	5642
75	5927	6302	5493
85	7620	7893	6879

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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>	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6
<b>5</b>	3031.2	3031.2	3031.2	3031.2	3033.6	3033.6	3031.2	3028.8	3028.8	3028.8
<b>10</b>	2978.4	2976.0	2978.4	2978.4	2980.8	2980.8	2978.4	2978.4	2978.4	2980.8
<b>15</b>	2877.6	2880.0	2877.6	2877.6	2884.8	2889.6	2889.6	2889.6	2889.6	2889.6
<b>20</b>	2740.8	2738.4	2738.4	2738.4	2743.2	2748.0	2750.4	2750.4	2750.4	2752.8
<b>25</b>	2568.0	2568.0	2570.4	2575.2	2580.0	2582.4	2582.4	2584.8	2584.8	2584.8
<b>30</b>	2392.8	2392.8	2395.2	2400.0	2402.4	2404.8	2402.4	2404.8	2402.4	2402.4
<b>35</b>	2220.0	2222.4	2227.2	2229.6	2229.6	2227.2	2222.4	2220.0	2217.6	2217.6
<b>40</b>	2059.2	2061.6	2064.0	2066.4	2064.0	2056.8	2052.0	2047.2	2040.0	2040.0
<b>45</b>	1900.8	1900.8	1908.0	1908.0	1905.6	1898.4	1888.8	1884.0	1876.8	1872.0
<b>50</b>	1740.0	1740.0	1747.2	1749.6	1749.6	1742.4	1735.2	1728.0	1720.8	1716.0
<b>55</b>	1572.0	1574.4	1584.0	1588.8	1588.8	1586.4	1579.2	1574.4	1567.2	1564.8
<b>60</b>	1406.4	1408.8	1423.2	1430.4	1435.2	1435.2	1435.2	1432.8	1428.0	1423.2
<b>65</b>	1204.8	1209.6	1224.0	1236.0	1248.0	1255.2	1257.6	1260.0	1257.6	1252.8
<b>70</b>	996.0	1000.8	1017.6	1032.0	1046.4	1058.4	1068.0	1075.2	1077.6	1072.8
<b>75</b>	787.2	794.4	811.2	828.0	847.2	864.0	876.0	885.6	890.4	888.0
<b>80</b>	600.0	607.2	624.0	640.8	660.0	679.2	693.6	703.2	710.4	708.0
<b>85</b>	444.0	448.8	458.4	470.4	484.8	499.2	511.2	520.8	525.6	525.6
<b>90</b>	211.2	213.6	220.8	232.8	244.8	254.4	264.0	273.6	276.0	276.0
<b>95</b>	228.0	230.4	235.2	244.8	254.4	261.6	268.8	271.2	268.8	264.0
<b>100</b>	244.8	244.8	252.0	261.6	271.2	280.8	288.0	292.8	295.2	288.0
<b>105</b>	189.6	194.4	201.6	211.2	223.2	230.4	237.6	240.0	242.4	252.0
<b>110</b>	148.8	153.6	165.6	180.0	196.8	213.6	230.4	244.8	256.8	261.6
<b>115</b>	180.0	182.4	192.0	204.0	213.6	225.6	232.8	240.0	244.8	247.2
<b>120</b>	172.8	175.2	182.4	189.6	196.8	204.0	211.2	218.4	223.2	223.2
<b>125</b>	156.0	158.4	163.2	170.4	177.6	187.2	194.4	199.2	201.6	204.0
<b>130</b>	144.0	146.4	151.2	158.4	165.6	172.8	177.6	182.4	184.8	187.2
<b>135</b>	136.8	139.2	144.0	148.8	153.6	158.4	165.6	170.4	172.8	170.4
<b>140</b>	124.8	127.2	129.6	136.8	141.6	146.4	148.8	151.2	153.6	156.0
<b>145</b>	115.2	117.6	120.0	122.4	124.8	129.6	132.0	132.0	134.4	134.4
<b>150</b>	100.8	100.8	103.2	108.0	110.4	112.8	115.2	115.2	115.2	115.2
<b>155</b>	88.8	91.2	91.2	93.6	96.0	98.4	98.4	98.4	100.8	100.8
<b>160</b>	79.2	79.2	79.2	81.6	81.6	84.0	86.4	86.4	88.8	88.8
<b>165</b>	69.6	69.6	69.6	69.6	72.0	72.0	72.0	72.0	72.0	72.0
<b>170</b>	57.6	57.6	60.0	60.0	60.0	60.0	57.6	57.6	57.6	57.6
<b>175</b>	50.4	50.4	50.4	50.4	50.4	50.4	48.0	48.0	48.0	48.0
<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>	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6	3045.6
<b>5</b>	3028.8	3031.2	3033.6	3036.0	3036.0	3033.6	3033.6	3033.6	3033.6
<b>10</b>	2978.4	2980.8	2980.8	2983.2	2983.2	2983.2	2983.2	2980.8	2980.8
<b>15</b>	2889.6	2889.6	2892.0	2892.0	2887.2	2884.8	2882.4	2882.4	2882.4
<b>20</b>	2752.8	2752.8	2755.2	2752.8	2748.0	2743.2	2745.6	2748.0	2750.4
<b>25</b>	2587.2	2589.6	2589.6	2587.2	2587.2	2582.4	2582.4	2580.0	2580.0
<b>30</b>	2404.8	2409.6	2409.6	2412.0	2414.4	2409.6	2404.8	2402.4	2404.8
<b>35</b>	2220.0	2224.8	2227.2	2234.4	2236.8	2236.8	2234.4	2232.0	2232.0
<b>40</b>	2042.4	2044.8	2052.0	2059.2	2064.0	2068.8	2066.4	2064.0	2064.0
<b>45</b>	1874.4	1879.2	1886.4	1891.2	1898.4	1900.8	1898.4	1893.6	1893.6
<b>50</b>	1716.0	1718.4	1723.2	1728.0	1730.4	1730.4	1725.6	1718.4	1716.0
<b>55</b>	1562.4	1560.0	1560.0	1560.0	1560.0	1555.2	1548.0	1536.0	1533.6
<b>60</b>	1418.4	1413.6	1408.8	1404.0	1396.8	1387.2	1375.2	1360.8	1358.4

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**CANDELA TABULATION - (Cont.)**

<b>65</b>	1248.0	1238.4	1228.8	1216.8	1202.4	1185.6	1168.8	1152.0	1147.2
<b>70</b>	1065.6	1053.6	1036.8	1020.0	1000.8	979.2	960.0	940.8	933.6
<b>75</b>	880.8	866.4	847.2	825.6	801.6	777.6	756.0	736.8	729.6
<b>80</b>	700.8	686.4	667.2	645.6	621.6	597.6	573.6	556.8	549.6
<b>85</b>	518.4	506.4	492.0	472.8	453.6	434.4	417.6	405.6	400.8
<b>90</b>	273.6	266.4	256.8	242.4	230.4	216.0	204.0	196.8	194.4
<b>95</b>	254.4	242.4	228.0	216.0	204.0	192.0	180.0	172.8	170.4
<b>100</b>	278.4	266.4	256.8	252.0	247.2	237.6	230.4	223.2	220.8
<b>105</b>	259.2	266.4	261.6	254.4	242.4	230.4	218.4	211.2	208.8
<b>110</b>	261.6	261.6	256.8	247.2	235.2	223.2	211.2	201.6	199.2
<b>115</b>	247.2	244.8	240.0	232.8	223.2	211.2	201.6	194.4	192.0
<b>120</b>	223.2	220.8	213.6	208.8	201.6	192.0	184.8	177.6	175.2
<b>125</b>	204.0	201.6	196.8	189.6	182.4	172.8	165.6	158.4	156.0
<b>130</b>	187.2	184.8	180.0	175.2	165.6	158.4	151.2	146.4	141.6
<b>135</b>	172.8	170.4	165.6	160.8	153.6	146.4	141.6	136.8	134.4
<b>140</b>	153.6	151.2	148.8	146.4	141.6	134.4	129.6	124.8	122.4
<b>145</b>	134.4	132.0	132.0	127.2	124.8	122.4	117.6	115.2	112.8
<b>150</b>	115.2	115.2	112.8	110.4	110.4	105.6	103.2	100.8	100.8
<b>155</b>	100.8	98.4	98.4	96.0	96.0	93.6	91.2	88.8	88.8
<b>160</b>	88.8	86.4	86.4	84.0	81.6	81.6	79.2	79.2	76.8
<b>165</b>	72.0	72.0	72.0	72.0	69.6	69.6	69.6	69.6	67.2
<b>170</b>	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6
<b>175</b>	48.0	48.0	48.0	50.4	50.4	50.4	50.4	50.4	50.4
<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	1099.99	N.A.	10.70
0-30	2289.9	N.A.	22.20
0-40	3686.51	N.A.	35.80
0-60	6554.92	N.A.	63.60
0-80	8645.16	N.A.	83.90
0-90	9146.81	N.A.	88.70
10-90	8859.07	N.A.	85.90
20-40	2586.52	N.A.	25.10
20-50	4049.68	N.A.	39.30
40-70	4078.35	N.A.	39.60
60-80	2090.24	N.A.	20.30
70-80	880.30	N.A.	8.50
80-90	501.65	N.A.	4.90
90-110	514.27	N.A.	5.00
90-120	728.37	N.A.	7.10
90-130	893.14	N.A.	8.70
90-150	1092.85	N.A.	10.60
90-180	1162.38	N.A.	11.30
110-180	648.12	N.A.	6.30
0-180	10309.19	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	287.73
10-20	812.26
20-30	1189.91
30-40	1396.61
40-50	1463.17
50-60	1405.25
60-70	1209.94
70-80	880.30
80-90	501.65
90-100	263.96
100-110	250.30
110-120	214.11
120-130	164.77
130-140	120.44
140-150	79.27
150-160	44.73
160-170	20.37
170-180	4.44

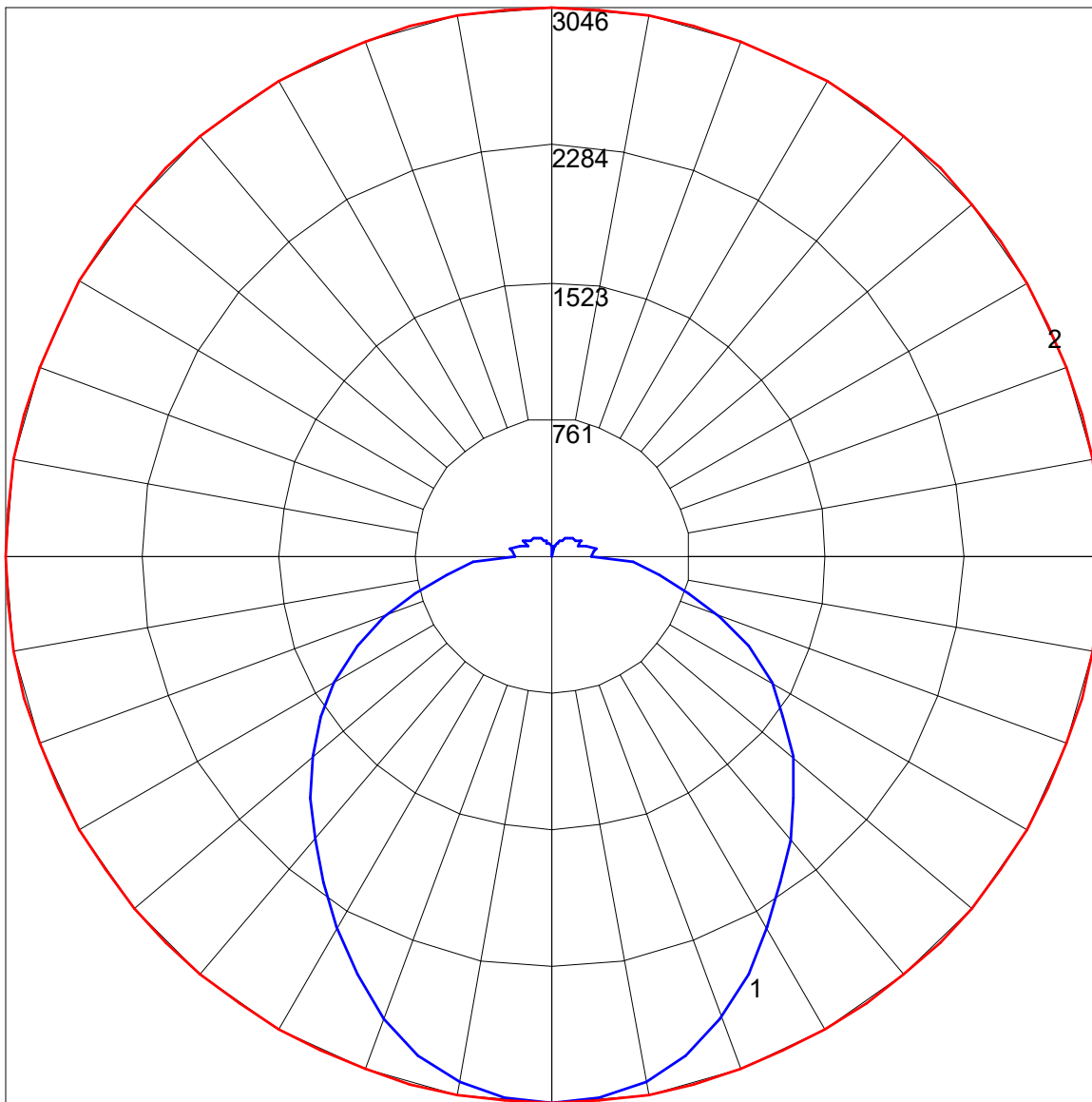
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	105	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	32	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 = 3045.6 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.)