



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : ZDS-33-LED4-SO.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] L101403501  
 [TESTLAB] LIGHT LABORATORY, INC.  
 [ISSUE DATE] 10/20/2014  
 [MANUFACT] PRUDENTIAL LTG.  
 [LUMCAT] ZDS-33-LED4-SO  
 [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	10481
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	97
Total Luminaire Watts	108
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	5966	5771	5944
55	5970	5795	5825
65	6024	6039	5736
75	6025	6408	5585
85	7747	8024	6993

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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>	3096.36	3096.36	3096.36	3096.36	3096.36	3096.36	3096.36	3096.36	3096.36	3096.36
<b>5</b>	3081.72	3081.72	3081.72	3081.72	3084.16	3084.16	3081.72	3079.28	3079.28	3079.28
<b>10</b>	3028.04	3025.60	3028.04	3028.04	3030.48	3030.48	3028.04	3028.04	3028.04	3030.48
<b>15</b>	2925.56	2928.00	2925.56	2925.56	2932.88	2937.76	2937.76	2937.76	2937.76	2937.76
<b>20</b>	2786.48	2784.04	2784.04	2784.04	2788.92	2793.80	2796.24	2796.24	2796.24	2798.68
<b>25</b>	2610.80	2610.80	2613.24	2618.12	2623.00	2625.44	2625.44	2627.88	2627.88	2627.88
<b>30</b>	2432.68	2432.68	2435.12	2440.00	2442.44	2444.88	2442.44	2444.88	2442.44	2442.44
<b>35</b>	2257.00	2259.44	2264.32	2266.76	2266.76	2264.32	2259.44	2257.00	2254.56	2254.56
<b>40</b>	2093.52	2095.96	2098.40	2100.84	2098.40	2091.08	2086.20	2081.32	2074.00	2074.00
<b>45</b>	1932.48	1932.48	1939.80	1939.80	1937.36	1930.04	1920.28	1915.40	1908.08	1903.20
<b>50</b>	1769.00	1769.00	1776.32	1778.76	1778.76	1771.44	1764.12	1756.80	1749.48	1744.60
<b>55</b>	1598.20	1600.64	1610.40	1615.28	1615.28	1612.84	1605.52	1600.64	1593.32	1590.88
<b>60</b>	1429.84	1432.28	1446.92	1454.24	1459.12	1459.12	1459.12	1456.68	1451.80	1446.92
<b>65</b>	1224.88	1229.76	1244.40	1256.60	1268.80	1276.12	1278.56	1281.00	1278.56	1273.68
<b>70</b>	1012.60	1017.48	1034.56	1049.20	1063.84	1076.04	1085.80	1093.12	1095.56	1090.68
<b>75</b>	800.32	807.64	824.72	841.80	861.32	878.40	890.60	900.36	905.24	902.80
<b>80</b>	610.00	617.32	634.40	651.48	671.00	690.52	705.16	714.92	722.24	719.80
<b>85</b>	451.40	456.28	466.04	478.24	492.88	507.52	519.72	529.48	534.36	534.36
<b>90</b>	214.72	217.16	224.48	236.68	248.88	258.64	268.40	278.16	280.60	280.60
<b>95</b>	231.80	234.24	239.12	248.88	258.64	265.96	273.28	275.72	273.28	268.40
<b>100</b>	248.88	248.88	256.20	265.96	275.72	285.48	292.80	297.68	300.12	292.80
<b>105</b>	192.76	197.64	204.96	214.72	226.92	234.24	241.56	244.00	246.44	256.20
<b>110</b>	151.28	156.16	168.36	183.00	200.08	217.16	234.24	248.88	261.08	265.96
<b>115</b>	183.00	185.44	195.20	207.40	217.16	229.36	236.68	244.00	248.88	251.32
<b>120</b>	175.68	178.12	185.44	192.76	200.08	207.40	214.72	222.04	226.92	226.92
<b>125</b>	158.60	161.04	165.92	173.24	180.56	190.32	197.64	202.52	204.96	207.40
<b>130</b>	146.40	148.84	153.72	161.04	168.36	175.68	180.56	185.44	187.88	190.32
<b>135</b>	139.08	141.52	146.40	151.28	156.16	161.04	168.36	173.24	175.68	173.24
<b>140</b>	126.88	129.32	131.76	139.08	143.96	148.84	151.28	153.72	156.16	158.60
<b>145</b>	117.12	119.56	122.00	124.44	126.88	131.76	134.20	134.20	136.64	136.64
<b>150</b>	102.48	102.48	104.92	109.80	112.24	114.68	117.12	117.12	117.12	117.12
<b>155</b>	90.28	92.72	92.72	95.16	97.60	100.04	100.04	100.04	102.48	102.48
<b>160</b>	80.52	80.52	80.52	82.96	82.96	85.40	87.84	87.84	90.28	90.28
<b>165</b>	70.76	70.76	70.76	70.76	73.20	73.20	73.20	73.20	73.20	73.20
<b>170</b>	58.56	58.56	61.00	61.00	61.00	61.00	58.56	58.56	58.56	58.56
<b>175</b>	51.24	51.24	51.24	51.24	51.24	51.24	48.80	48.80	48.80	48.80
<b>180</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>0</b>	3096.36	3096.36	3096.36	3096.36	3096.36	3096.36	3096.36	3096.36	3096.36
<b>5</b>	3079.28	3081.72	3084.16	3086.60	3086.60	3084.16	3084.16	3084.16	3084.16
<b>10</b>	3028.04	3030.48	3030.48	3032.92	3032.92	3032.92	3032.92	3030.48	3030.48
<b>15</b>	2937.76	2937.76	2940.20	2940.20	2935.32	2932.88	2930.44	2930.44	2930.44
<b>20</b>	2798.68	2798.68	2801.12	2798.68	2793.80	2788.92	2791.36	2793.80	2796.24
<b>25</b>	2630.32	2632.76	2632.76	2630.32	2630.32	2625.44	2625.44	2623.00	2623.00
<b>30</b>	2444.88	2449.76	2449.76	2452.20	2454.64	2449.76	2444.88	2442.44	2444.88
<b>35</b>	2257.00	2261.88	2264.32	2271.64	2274.08	2274.08	2271.64	2269.20	2269.20
<b>40</b>	2076.44	2078.88	2086.20	2093.52	2098.40	2103.28	2100.84	2098.40	2098.40
<b>45</b>	1905.64	1910.52	1917.84	1922.72	1930.04	1932.48	1930.04	1925.16	1925.16
<b>50</b>	1744.60	1747.04	1751.92	1756.80	1759.24	1759.24	1754.36	1747.04	1744.60
<b>55</b>	1588.44	1586.00	1586.00	1586.00	1586.00	1581.12	1573.80	1561.60	1559.16
<b>60</b>	1442.04	1437.16	1432.28	1427.40	1420.08	1410.32	1398.12	1383.48	1381.04

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**CANDELA TABULATION - (Cont.)**

<b>65</b>	1268.80	1259.04	1249.28	1237.08	1222.44	1205.36	1188.28	1171.20	1166.32
<b>70</b>	1083.36	1071.16	1054.08	1037.00	1017.48	995.52	976.00	956.48	949.16
<b>75</b>	895.48	880.84	861.32	839.36	814.96	790.56	768.60	749.08	741.76
<b>80</b>	712.48	697.84	678.32	656.36	631.96	607.56	583.16	566.08	558.76
<b>85</b>	527.04	514.84	500.20	480.68	461.16	441.64	424.56	412.36	407.48
<b>90</b>	278.16	270.84	261.08	246.44	234.24	219.60	207.40	200.08	197.64
<b>95</b>	258.64	246.44	231.80	219.60	207.40	195.20	183.00	175.68	173.24
<b>100</b>	283.04	270.84	261.08	256.20	251.32	241.56	234.24	226.92	224.48
<b>105</b>	263.52	270.84	265.96	258.64	246.44	234.24	222.04	214.72	212.28
<b>110</b>	265.96	265.96	261.08	251.32	239.12	226.92	214.72	204.96	202.52
<b>115</b>	251.32	248.88	244.00	236.68	226.92	214.72	204.96	197.64	195.20
<b>120</b>	226.92	224.48	217.16	212.28	204.96	195.20	187.88	180.56	178.12
<b>125</b>	207.40	204.96	200.08	192.76	185.44	175.68	168.36	161.04	158.60
<b>130</b>	190.32	187.88	183.00	178.12	168.36	161.04	153.72	148.84	143.96
<b>135</b>	175.68	173.24	168.36	163.48	156.16	148.84	143.96	139.08	136.64
<b>140</b>	156.16	153.72	151.28	148.84	143.96	136.64	131.76	126.88	124.44
<b>145</b>	136.64	134.20	134.20	129.32	126.88	124.44	119.56	117.12	114.68
<b>150</b>	117.12	117.12	114.68	112.24	112.24	107.36	104.92	102.48	102.48
<b>155</b>	102.48	100.04	100.04	97.60	97.60	95.16	92.72	90.28	90.28
<b>160</b>	90.28	87.84	87.84	85.40	82.96	82.96	80.52	80.52	78.08
<b>165</b>	73.20	73.20	73.20	73.20	70.76	70.76	70.76	70.76	68.32
<b>170</b>	58.56	58.56	58.56	58.56	58.56	58.56	58.56	58.56	58.56
<b>175</b>	48.80	48.80	48.80	51.24	51.24	51.24	51.24	51.24	51.24
<b>180</b>	0.00	0.00	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	1118.32	N.A.	10.70
0-30	2328.06	N.A.	22.20
0-40	3747.95	N.A.	35.80
0-60	6664.17	N.A.	63.60
0-80	8789.25	N.A.	83.90
0-90	9299.25	N.A.	88.70
10-90	9006.73	N.A.	85.90
20-40	2629.63	N.A.	25.10
20-50	4117.18	N.A.	39.30
40-70	4146.33	N.A.	39.60
60-80	2125.08	N.A.	20.30
70-80	894.97	N.A.	8.50
80-90	510.01	N.A.	4.90
90-110	522.84	N.A.	5.00
90-120	740.51	N.A.	7.10
90-130	908.03	N.A.	8.70
90-150	1111.06	N.A.	10.60
90-180	1181.76	N.A.	11.30
110-180	658.92	N.A.	6.30
0-180	10481.01	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	292.53
10-20	825.79
20-30	1209.74
30-40	1419.89
40-50	1487.55
50-60	1428.67
60-70	1230.11
70-80	894.97
80-90	510.01
90-100	268.36
100-110	254.47
110-120	217.68
120-130	167.51
130-140	122.45
140-150	80.59
150-160	45.47
160-170	20.71
170-180	4.51

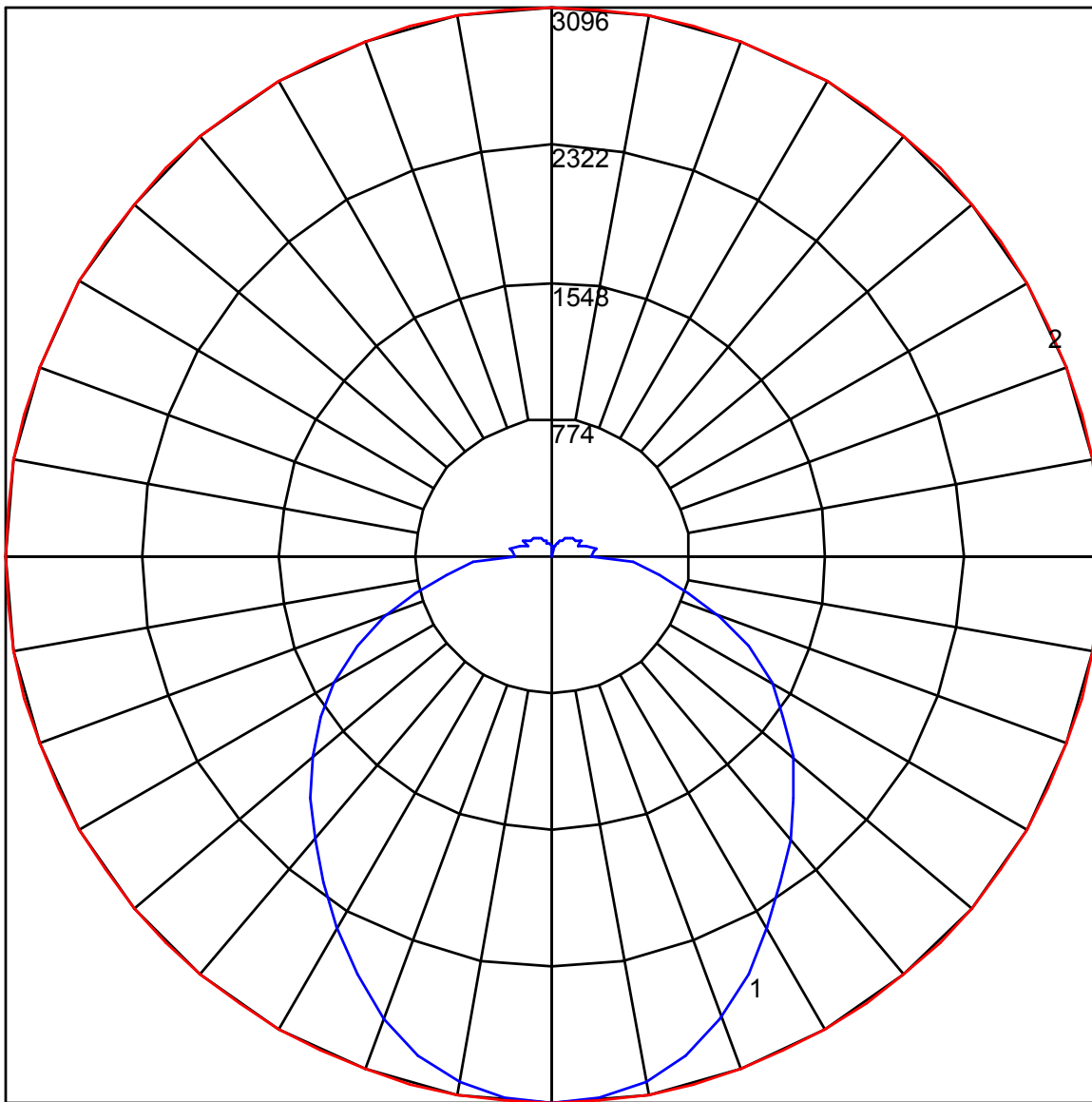
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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 = 3096.36 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.)