



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : O-40-TU-LO-D9.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] L041502002  
 [TESTLAB]  
 [ISSUE DATE]  
 [MANUFAC] PRUDENTIAL LTG.  
 [LUMCAT] O-40-TU-LO-D9  
 [LUMINAIRE] 48"DIA. X 5"H. LED FIXTURE  
 [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.  
 [TEST PROCEDURE] IESNA:LM-79-08

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2701
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	53
Total Luminaire Watts	51
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	3.00 ft (Diameter)
Luminous Width (90-270)	3.00 ft (Diameter)
Luminous Height	0.42 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	807	809	810
55	718	718	719
65	618	618	618
75	456	455	455
85	191	188	185

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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>	701.933	701.933	701.933	701.933	701.933	701.933	701.933	701.933	701.933	701.933
<b>5</b>	698.115	698.070	698.033	697.972	697.928	697.852	697.837	697.830	697.867	697.898
<b>10</b>	686.768	686.753	686.715	686.722	686.775	686.768	686.753	686.737	686.813	686.857
<b>15</b>	668.138	668.175	668.205	668.258	668.273	668.258	668.258	668.332	668.430	668.490
<b>20</b>	643.237	643.245	643.245	643.320	643.388	643.395	643.425	643.567	643.710	643.800
<b>25</b>	611.783	611.842	611.850	611.918	612.067	612.128	612.232	612.337	612.442	612.540
<b>30</b>	575.265	575.273	575.310	575.408	575.550	575.640	575.722	575.857	575.970	576.045
<b>35</b>	534.495	534.525	534.533	534.600	534.683	534.840	534.960	535.080	535.170	535.290
<b>40</b>	489.780	489.855	489.817	489.885	489.975	490.163	490.358	490.560	490.748	490.837
<b>45</b>	442.163	442.140	442.050	442.072	442.140	442.178	442.185	442.320	442.695	442.897
<b>50</b>	391.770	391.755	391.658	391.582	391.590	391.590	391.627	391.702	391.777	391.882
<b>55</b>	339.780	339.750	339.630	339.577	339.510	339.450	339.465	339.540	339.592	339.660
<b>60</b>	292.283	292.320	292.230	292.178	292.103	291.863	291.735	291.765	291.795	291.840
<b>65</b>	237.428	237.450	237.540	237.322	237.368	237.248	237.248	237.255	237.180	237.120
<b>70</b>	182.438	182.333	182.340	182.257	182.250	182.205	182.190	182.197	182.145	182.130
<b>75</b>	129.105	128.985	129.045	129.007	129.000	128.955	128.917	128.933	128.910	128.887
<b>80</b>	78.600	78.593	78.540	78.517	78.517	78.502	78.450	78.382	78.315	78.240
<b>85</b>	33.165	33.165	33.135	33.120	33.097	33.030	32.962	32.910	32.850	32.760
<b>90</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>95</b>	16.613	16.575	16.462	16.260	16.027	15.750	15.488	15.248	15.037	14.873
<b>100</b>	29.310	29.242	29.175	29.212	29.145	29.055	28.950	28.815	28.740	28.598
<b>105</b>	45.833	45.885	46.148	46.282	46.358	46.425	46.365	46.350	46.140	45.998
<b>110</b>	64.755	64.695	64.920	65.047	65.025	64.995	64.890	64.868	64.942	64.942
<b>115</b>	85.230	85.147	85.267	85.192	85.485	85.620	85.418	85.358	85.185	84.983
<b>120</b>	105.780	105.907	106.020	106.343	106.463	106.200	105.855	105.802	105.870	105.728
<b>125</b>	125.153	125.370	124.995	124.942	125.460	125.677	125.933	126.270	126.278	126.345
<b>130</b>	147.218	147.360	147.240	147.450	148.222	148.942	149.243	149.498	149.805	149.940
<b>135</b>	171.262	171.218	171.135	171.420	172.350	172.882	173.317	173.880	174.757	175.215
<b>140</b>	194.213	194.265	194.400	194.452	195.630	197.197	198.540	199.455	199.972	200.010
<b>145</b>	219.450	219.345	219.382	219.713	220.537	221.423	222.248	223.140	223.545	223.905
<b>150</b>	243.375	242.805	242.947	243.278	243.577	244.132	245.018	245.235	245.708	245.873
<b>155</b>	264.067	264.015	264.480	263.925	264.113	264.757	265.530	265.770	266.235	266.257
<b>160</b>	282.998	282.967	282.038	282.262	282.435	282.840	283.642	283.875	283.905	284.010
<b>165</b>	297.855	298.320	297.750	297.158	297.555	297.803	298.065	298.635	298.733	298.553
<b>170</b>	308.858	308.978	308.813	308.332	308.467	308.947	309.188	309.810	309.780	309.450
<b>175</b>	314.707	314.550	314.520	314.850	315.150	315.915	316.185	316.620	316.658	316.080
<b>180</b>	317.985	317.985	317.985	317.985	317.985	317.985	317.985	317.985	317.985	317.985

**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>	701.933	701.933	701.933	701.933	701.933	701.933	701.933	701.933	701.933
<b>5</b>	697.942	697.957	697.987	698.048	698.077	698.070	698.115	698.160	698.250
<b>10</b>	686.888	686.947	687.000	687.045	687.090	687.090	687.128	687.210	687.285
<b>15</b>	668.595	668.700	668.768	668.857	668.918	668.880	668.880	668.933	668.977
<b>20</b>	643.920	644.003	644.055	644.122	644.190	644.212	644.273	644.265	644.220
<b>25</b>	612.668	612.773	612.878	612.915	612.975	613.013	613.065	613.035	613.005
<b>30</b>	576.188	576.278	576.398	576.480	576.548	576.592	576.592	576.622	576.607
<b>35</b>	535.372	535.492	535.658	535.725	535.830	535.860	535.845	535.860	535.800
<b>40</b>	490.965	491.077	491.168	491.295	491.377	491.415	491.392	491.370	491.303
<b>45</b>	443.040	443.137	443.235	443.310	443.415	443.467	443.467	443.408	443.400
<b>50</b>	392.100	392.295	392.430	392.535	392.595	392.707	392.707	392.632	392.685
<b>55</b>	339.728	339.817	339.960	340.043	340.140	340.238	340.298	340.275	340.260
<b>60</b>	291.908	291.960	292.043	292.087	292.155	292.252	292.342	292.267	292.245

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**CANDELA TABULATION - (Cont.)**

<b>65</b>	237.143	237.188	237.240	237.285	237.278	237.292	237.345	237.285	237.262
<b>70</b>	182.107	182.167	182.205	182.190	182.227	182.167	182.220	182.153	182.032
<b>75</b>	128.873	128.903	128.895	128.887	128.910	128.910	128.947	128.887	128.805
<b>80</b>	78.195	78.188	78.172	78.157	78.165	78.180	78.210	78.127	78.007
<b>85</b>	32.685	32.648	32.587	32.528	32.453	32.385	32.370	32.250	32.220
<b>90</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>95</b>	14.790	14.805	14.880	14.887	14.992	15.127	15.165	14.857	14.730
<b>100</b>	28.523	28.470	28.485	28.448	28.500	28.508	28.328	27.870	27.832
<b>105</b>	46.133	46.148	46.155	46.005	45.758	45.630	45.255	44.715	44.648
<b>110</b>	64.912	64.868	64.823	64.620	64.500	64.335	63.862	63.645	63.563
<b>115</b>	85.162	85.140	85.035	85.177	85.013	84.540	84.285	83.933	83.797
<b>120</b>	105.960	106.088	106.252	106.305	106.080	105.540	105.225	105.037	104.670
<b>125</b>	126.502	126.787	126.855	126.810	126.593	125.925	125.745	125.632	125.198
<b>130</b>	150.405	150.577	150.495	150.278	149.730	149.400	149.160	149.077	148.860
<b>135</b>	175.463	175.403	175.200	174.840	174.382	173.910	173.738	173.722	173.602
<b>140</b>	200.040	199.935	199.470	198.998	198.375	197.475	197.400	197.205	196.905
<b>145</b>	223.650	223.282	222.720	222.412	222.195	221.760	221.572	221.460	221.400
<b>150</b>	245.933	245.670	245.370	244.988	244.597	244.643	244.282	244.553	244.890
<b>155</b>	266.340	266.243	266.100	265.665	264.975	264.832	265.155	264.555	264.705
<b>160</b>	284.108	284.092	283.905	283.290	282.885	282.832	282.375	283.582	283.238
<b>165</b>	298.710	298.627	297.998	297.757	297.555	296.895	297.540	298.298	297.915
<b>170</b>	309.735	309.502	309.120	308.805	308.415	308.377	308.355	308.303	308.250
<b>175</b>	316.680	316.470	316.155	315.728	315.045	314.820	314.558	314.108	314.363
<b>180</b>	317.985	317.985	317.985	317.985	317.985	317.985	317.985	317.985	317.985

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	254.84	N.A.	9.40
0-30	537.00	N.A.	19.90
0-40	871.82	N.A.	32.30
0-60	1518.55	N.A.	56.20
0-80	1890.24	N.A.	70.00
0-90	1929.39	N.A.	71.40
10-90	1863.11	N.A.	69.00
20-40	616.99	N.A.	22.80
20-50	958.52	N.A.	35.50
40-70	881.63	N.A.	32.60
60-80	371.69	N.A.	13.80
70-80	136.78	N.A.	5.10
80-90	39.15	N.A.	1.40
90-110	65.08	N.A.	2.40
90-120	149.39	N.A.	5.50
90-130	262.80	N.A.	9.70
90-150	535.45	N.A.	19.80
90-180	771.30	N.A.	28.60
110-180	706.22	N.A.	26.10
0-180	2700.68	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	66.28
10-20	188.56
20-30	282.17
30-40	334.82
40-50	341.54
50-60	305.19
60-70	234.90
70-80	136.78
80-90	39.15
90-100	16.19
100-110	48.89
110-120	84.31
120-130	113.41
130-140	133.98
140-150	138.67
150-160	122.03
160-170	83.90
170-180	29.91

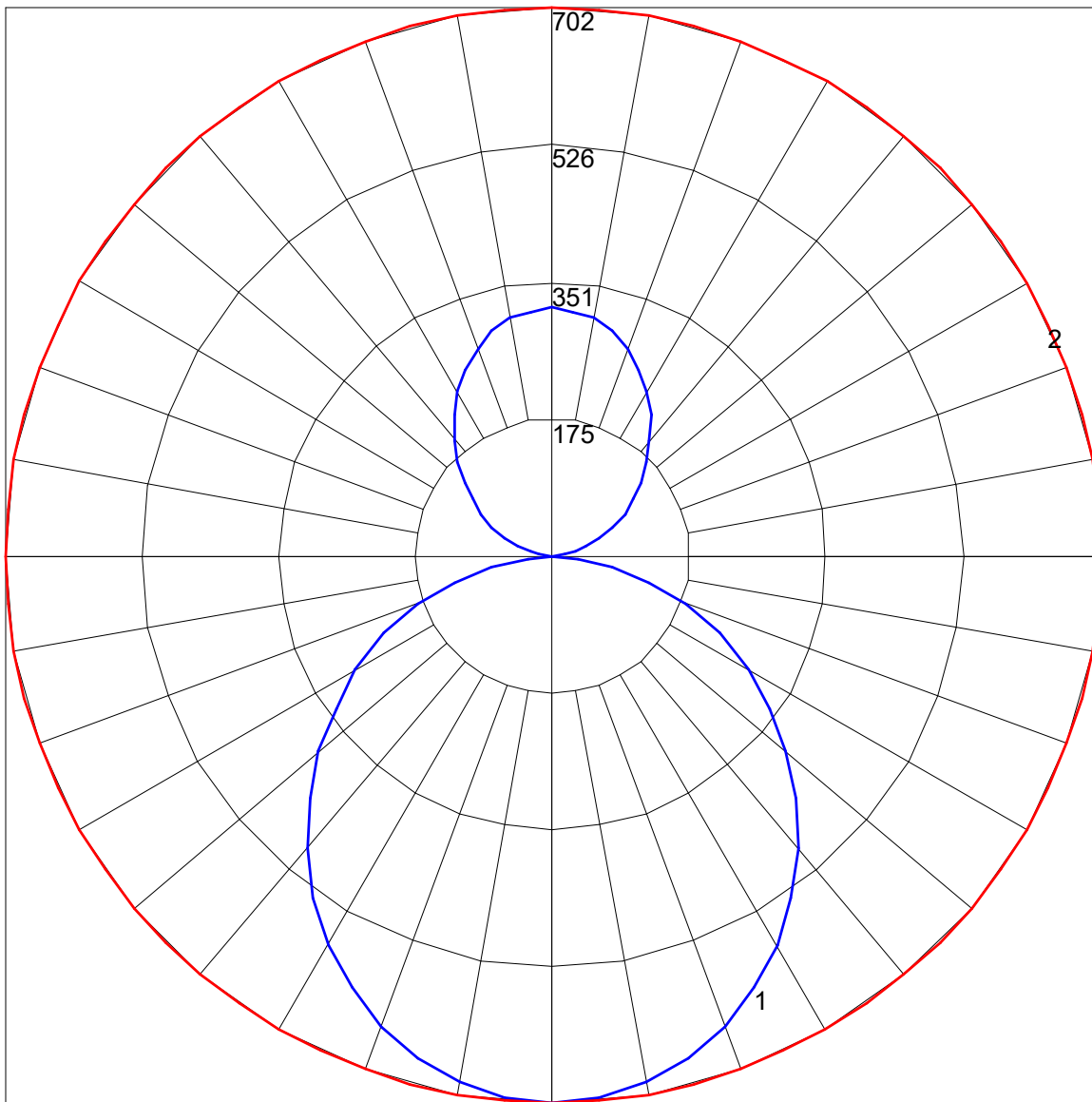
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	76	76	76	71
1	102	98	94	90	97	93	89	86	83	81	78	75	73	71	67	65	64	60
2	93	85	79	73	88	81	75	70	73	68	64	65	62	59	58	56	53	50
3	85	75	67	61	80	71	64	58	64	58	54	58	53	49	52	48	45	42
4	78	66	58	51	73	63	55	50	57	51	46	51	46	42	46	42	39	36
5	71	59	50	44	67	56	48	43	51	45	40	46	41	37	41	37	34	31
6	66	53	44	38	62	51	43	37	46	39	35	42	36	32	38	33	30	27
7	61	48	40	34	57	46	38	33	42	35	30	38	32	28	34	30	26	24
8	57	44	36	30	53	42	34	29	38	32	27	35	29	25	31	27	24	21
9	53	40	32	27	50	38	31	26	35	29	24	32	27	23	29	25	21	19
10	49	37	29	24	47	35	28	23	32	26	22	30	24	21	27	23	19	17

POLAR GRAPH



Maximum Candela = 701.933 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.)