



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : ZIS-22-LED-MO.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] L101411401R01  
 [TESTLAB] LIGHT LABORATORY, INC.  
 [ISSUE DATE] 11/20/2014  
 [MANUFAC] PRUDENTIAL LTG.  
 [LUMCAT] ZIS-LED SO-22-MO-SAL-DM10  
 [MORE] DIFFUSED LENS  
 [BALLASTCAT] OSRAM OPTOTRONIC  
 [BALLAST]  
 [LAMPPOSITION] 0,0  
 [LAMPCAT] N/A  
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
 [ INPUT] 1  
 [ \_TEST PROCEDURE] IESNA:LM-79-08

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4977
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	113
Total Luminaire Watts	44
Ballast Factor	1.00
CIE Type	General Diffuse
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)	2.02 ft
Luminous Width (90-270)	2.02 ft
Luminous Height	0.13 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1536	1614	1537
55	1752	1836	1744
65	2156	2233	2170
75	2988	2971	3065
85	5757	4028	5995

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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>	397.056	397.056	397.056	397.056	397.056	397.056	397.056	397.056	397.056	397.056
<b>5</b>	403.482	403.266	403.602	403.368	403.122	403.278	403.356	403.392	403.350	403.500
<b>10</b>	416.658	416.502	416.616	416.484	416.736	417.366	417.762	418.068	418.218	418.494
<b>15</b>	431.088	431.118	431.346	431.772	432.630	433.842	434.820	435.594	436.164	436.632
<b>20</b>	443.844	443.610	444.942	446.112	447.858	449.706	451.446	452.904	454.110	454.944
<b>25</b>	452.616	453.030	454.956	457.284	459.966	463.002	465.342	467.358	468.918	469.938
<b>30</b>	456.144	457.026	460.050	463.350	467.124	471.030	474.438	476.850	478.800	479.964
<b>35</b>	450.384	451.530	455.814	460.596	466.518	472.254	477.204	480.492	482.670	483.894
<b>40</b>	444.090	445.650	450.384	455.706	461.538	466.794	471.744	475.536	479.412	481.194
<b>45</b>	438.636	441.006	446.178	451.890	456.984	461.112	464.910	468.642	471.114	472.380
<b>50</b>	426.714	429.678	434.832	441.294	448.056	453.300	457.452	460.818	461.754	462.108
<b>55</b>	416.418	419.178	425.346	431.742	437.562	442.206	446.346	449.448	451.068	451.476
<b>60</b>	407.166	410.178	416.496	422.700	427.890	432.480	436.266	438.762	440.058	440.928
<b>65</b>	393.510	396.642	402.900	409.452	415.236	419.970	423.396	425.610	427.068	427.896
<b>70</b>	379.806	383.058	389.754	395.688	400.608	404.328	407.088	409.032	410.556	411.804
<b>75</b>	363.930	367.026	372.828	377.550	381.366	384.306	386.418	388.002	389.562	390.906
<b>80</b>	348.180	350.724	353.814	355.506	356.202	356.040	355.662	355.500	356.010	357.234
<b>85</b>	330.438	328.224	319.950	310.224	300.138	290.442	282.006	275.736	272.238	271.806
<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>	330.762	328.482	319.680	308.736	297.810	287.874	279.456	273.774	270.972	271.044
<b>100</b>	345.948	348.630	351.804	353.610	354.354	354.480	354.252	354.432	355.230	356.802
<b>105</b>	359.892	363.144	369.030	373.968	377.952	381.138	383.658	385.836	387.996	389.862
<b>110</b>	374.250	377.634	384.444	390.768	395.958	400.122	403.440	406.044	408.300	410.196
<b>115</b>	387.414	390.534	397.092	404.076	410.364	415.500	419.520	422.418	424.554	426.162
<b>120</b>	401.292	404.400	410.928	417.546	423.276	428.382	432.786	435.930	437.856	439.062
<b>125</b>	411.552	414.270	420.600	427.362	433.584	438.612	443.154	446.586	448.710	449.520
<b>130</b>	423.594	425.976	431.808	438.246	444.894	450.606	455.052	458.448	459.546	460.008
<b>135</b>	436.542	438.486	444.060	449.742	454.986	459.318	462.990	466.386	468.660	469.650
<b>140</b>	443.058	444.336	448.698	453.972	459.690	464.922	469.500	472.842	476.370	477.642
<b>145</b>	448.638	449.754	454.002	458.634	464.280	469.788	474.288	477.126	478.884	479.640
<b>150</b>	453.468	454.152	456.870	460.218	463.764	467.466	470.424	472.608	474.144	474.774
<b>155</b>	448.686	449.028	450.756	452.952	455.358	457.920	460.026	461.670	462.840	463.476
<b>160</b>	438.288	437.958	438.930	439.968	441.480	443.262	444.792	446.004	446.898	447.462
<b>165</b>	423.792	423.756	423.816	424.290	425.064	426.168	427.038	427.626	427.992	428.316
<b>170</b>	408.252	408.102	408.168	407.856	408.006	408.606	408.972	409.218	409.242	409.488
<b>175</b>	394.428	394.218	394.518	394.260	393.942	393.948	393.900	393.822	393.684	393.720
<b>180</b>	386.538	386.538	386.538	386.538	386.538	386.538	386.538	386.538	386.538	386.538

**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>	397.056	397.056	397.056	397.056	397.056	397.056	397.056	397.056	397.056
<b>5</b>	403.602	403.878	404.112	404.244	404.226	404.532	404.742	404.430	404.622
<b>10</b>	418.572	418.800	418.938	418.944	418.710	418.896	419.262	419.148	419.454
<b>15</b>	436.968	437.184	437.196	436.818	436.230	436.020	436.074	436.236	436.284
<b>20</b>	455.460	455.478	455.154	454.374	453.210	452.172	451.848	451.020	451.326
<b>25</b>	470.478	470.310	469.722	468.582	466.752	464.742	462.930	461.634	461.238
<b>30</b>	480.342	479.850	478.674	476.610	473.652	470.604	467.538	465.168	464.334
<b>35</b>	483.924	482.892	480.906	477.786	474.198	470.034	465.990	462.192	460.806
<b>40</b>	480.990	479.436	476.796	472.866	468.282	463.062	457.890	453.654	451.848
<b>45</b>	472.908	471.360	468.300	463.992	458.520	452.982	447.294	441.744	438.936
<b>50</b>	461.676	460.110	457.344	453.228	447.630	441.036	434.424	428.484	425.244
<b>55</b>	450.354	448.614	445.854	442.158	437.538	431.376	424.626	418.014	414.390
<b>60</b>	440.532	439.200	436.554	433.050	428.790	423.552	417.114	410.466	406.680

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**CANDELA TABULATION - (Cont.)**

<b>65</b>	427.782	427.200	425.760	422.976	418.686	413.088	406.302	399.678	395.988
<b>70</b>	412.284	412.296	411.546	409.782	406.920	402.540	396.546	389.706	386.010
<b>75</b>	391.950	392.682	392.958	392.364	390.468	387.438	382.752	376.656	373.296
<b>80</b>	358.986	361.152	363.672	366.114	367.722	367.926	366.684	363.444	360.708
<b>85</b>	274.662	280.446	288.816	299.280	310.686	322.302	333.240	342.186	344.094
<b>90</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>95</b>	274.194	279.948	287.934	297.534	308.502	319.332	330.210	341.304	343.686
<b>100</b>	358.764	360.966	363.384	365.442	366.918	367.110	365.682	362.766	359.778
<b>105</b>	391.356	392.388	392.784	392.154	390.252	387.258	382.764	377.142	373.200
<b>110</b>	411.438	412.068	411.768	410.064	407.220	403.098	397.470	391.062	386.544
<b>115</b>	426.768	426.696	425.412	422.766	418.872	413.718	407.460	401.184	396.570
<b>120</b>	439.008	438.078	435.864	432.366	428.178	423.336	417.360	410.940	406.098
<b>125</b>	448.734	447.222	444.636	440.688	436.236	430.458	424.056	417.486	412.692
<b>130</b>	459.708	458.052	455.106	450.834	445.428	439.104	432.738	426.588	422.256
<b>135</b>	469.890	468.126	464.970	460.536	455.058	449.640	443.958	437.976	434.166
<b>140</b>	477.036	475.134	472.086	467.868	463.152	457.944	452.790	448.092	445.416
<b>145</b>	479.148	477.582	475.134	471.564	467.670	463.464	459.390	454.896	452.712
<b>150</b>	474.558	473.490	471.852	469.392	466.164	462.888	459.516	456.330	454.956
<b>155</b>	463.656	463.032	461.988	460.464	458.346	456.150	453.846	451.800	450.894
<b>160</b>	447.780	447.426	446.790	445.758	444.366	443.040	442.038	440.718	440.778
<b>165</b>	428.550	428.616	428.352	427.758	426.864	426.228	425.814	425.574	425.430
<b>170</b>	409.488	409.572	409.470	409.182	408.654	408.516	408.654	408.402	408.624
<b>175</b>	393.666	393.792	393.876	393.906	393.810	393.954	394.080	393.684	393.870
<b>180</b>	386.538	386.538	386.538	386.538	386.538	386.538	386.538	386.538	386.538

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	162.62	N.A.	3.30
0-30	376.95	N.A.	7.60
0-40	672.15	N.A.	13.50
0-60	1418.74	N.A.	28.50
0-80	2235.31	N.A.	44.90
0-90	2497.79	N.A.	50.20
10-90	2458.81	N.A.	49.40
20-40	509.53	N.A.	10.20
20-50	863.78	N.A.	17.40
40-70	1158.77	N.A.	23.30
60-80	816.57	N.A.	16.40
70-80	404.39	N.A.	8.10
80-90	262.48	N.A.	5.30
90-110	664.16	N.A.	13.30
90-120	1074.19	N.A.	21.60
90-130	1464.34	N.A.	29.40
90-150	2108.81	N.A.	42.40
90-180	2479.42	N.A.	49.80
110-180	1815.25	N.A.	36.50
0-180	4977.2	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	38.97
10-20	123.64
20-30	214.34
30-40	295.20
40-50	354.24
50-60	392.34
60-70	412.18
70-80	404.39
80-90	262.48
90-100	261.41
100-110	402.75
110-120	410.02
120-130	390.16
130-140	352.02
140-150	292.44
150-160	211.31
160-170	121.25
170-180	38.05

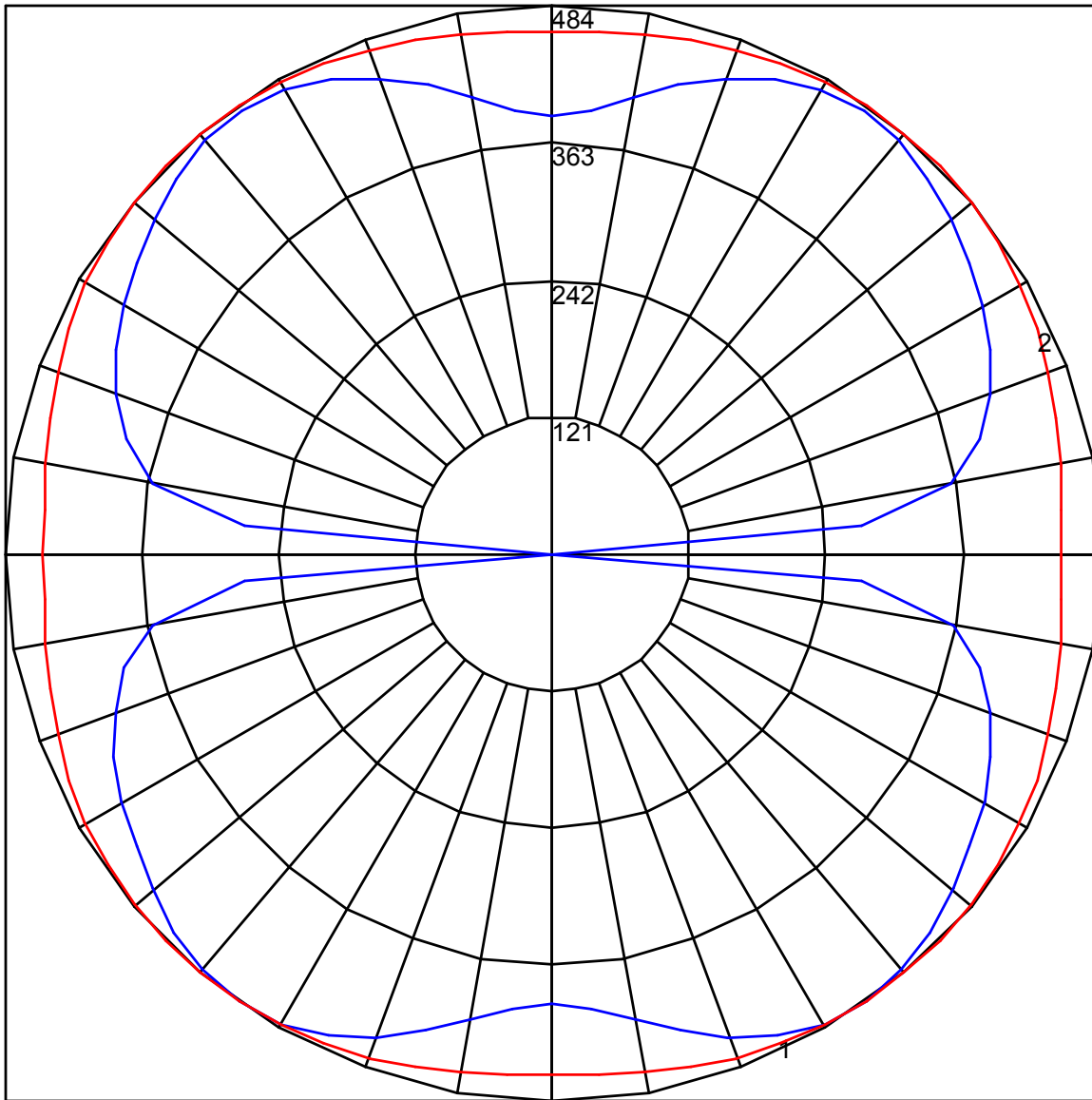
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	95	89	84	80	87	82	78	74	69	65	62	56	54	52	45	43	42	36
2	85	76	69	62	78	70	63	58	58	53	49	48	44	41	38	35	33	28
3	77	66	57	50	70	60	53	47	50	44	40	41	36	33	32	29	26	22
4	70	57	48	42	63	53	45	39	44	38	33	36	31	27	28	25	22	18
5	64	51	42	35	58	47	38	32	39	32	28	32	27	23	25	21	18	15
6	58	45	36	30	53	41	33	28	35	28	24	28	23	19	22	19	16	12
7	54	40	32	26	49	37	29	24	31	25	20	25	21	17	20	16	13	11
8	50	36	28	22	45	34	26	21	28	22	18	23	18	15	18	15	12	9
9	46	33	25	20	42	31	23	18	26	20	16	21	16	13	17	13	10	8
10	43	30	23	17	39	28	21	16	24	18	14	19	15	12	16	12	9	7

POLAR GRAPH



Maximum Candela = 483.924 Located At Horizontal Angle = 50, Vertical Angle = 35  
# 1 - Vertical Plane Through Horizontal Angles (50 - 230) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (35) (Through Max. Cd.)