



# Photometric Toolbox

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : LSC2-40-MVD-8XX.IES

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-1995

**CHARACTERISTICS**

Lumens Per Lamp	4188.44 (1 lamp)
Total Lamp Lumens	4188.44
Luminaire Lumens	4188
Total Luminaire Efficiency	100 %
Luminaire Efficacy Rating (LER)	107
Total Luminaire Watts	39.26
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.40
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Point
Luminous Length (0-180)	0.00 m
Luminous Width (90-270)	0.00 m
Luminous Height	0.00 m

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

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**CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
<b>0</b>	1466.847	1466.847	1466.847	1466.847	1466.847	1466.847	1466.847	1466.847	1466.847	1466.847
<b>5</b>	1464.109	1446.194	1435.280	1462.874	1504.058	1508.588	1500.146	1497.057	1490.055	1476.670
<b>10</b>	1440.016	1421.483	1428.690	1464.315	1533.505	1538.035	1515.178	1495.203	1480.995	1462.050
<b>15</b>	1400.067	1365.884	1422.719	1429.926	1515.384	1500.146	1458.549	1418.806	1447.841	1446.400
<b>20</b>	1370.620	1353.941	1380.093	1378.033	1424.572	1460.608	1445.576	1379.887	1414.894	1407.892
<b>25</b>	1323.670	1329.024	1302.048	1302.460	1370.414	1386.682	1386.888	1369.797	1365.060	1343.438
<b>30</b>	1222.974	1249.744	1238.418	1240.477	1363.207	1352.911	1309.461	1332.113	1313.992	1289.075
<b>35</b>	1130.515	1124.543	1144.311	1109.099	1322.023	1282.691	1261.069	1266.835	1244.802	1250.362
<b>40</b>	1035.378	1020.552	1039.291	1016.845	1171.287	1162.227	1190.438	1195.380	1170.258	1161.609
<b>45</b>	911.413	911.413	884.025	914.708	1072.444	1056.588	1084.800	1064.002	1044.439	1044.027
<b>50</b>	764.384	793.008	752.029	812.158	976.279	956.304	945.184	937.359	969.895	907.912
<b>55</b>	626.416	614.885	638.772	654.834	876.818	842.841	823.690	818.336	808.040	818.130
<b>60</b>	483.094	510.482	519.954	501.833	696.430	692.106	666.983	669.042	668.013	682.839
<b>65</b>	391.253	376.426	400.313	390.429	526.750	551.666	555.991	543.430	541.576	543.224
<b>70</b>	279.231	286.438	289.527	274.907	425.436	417.817	446.440	408.138	418.229	427.083
<b>75</b>	187.184	187.184	202.216	200.775	311.767	319.386	317.533	303.324	303.118	301.265
<b>80</b>	104.197	111.198	116.552	116.552	220.337	218.072	217.042	208.806	202.010	216.013
<b>85</b>	27.800	28.417	28.417	32.742	138.586	140.233	139.204	124.377	121.700	125.407
<b>90</b>	14.003	20.592	19.151	23.887	53.334	50.245	51.069	53.746	54.775	56.217
<b>95</b>	13.797	14.415	14.415	16.474	30.271	23.063	15.650	12.973	9.884	12.561
<b>100</b>	10.914	12.767	11.944	2.471	17.503	17.915	13.591	13.591	13.385	12.973
<b>105</b>	10.914	11.326	12.767	8.649	12.561	8.031	11.944	10.914	9.884	9.884
<b>110</b>	9.267	8.649	8.443	9.061	4.530	7.001	10.502	9.884	9.884	7.413
<b>115</b>	7.207	5.766	5.560	7.001	10.296	10.708	9.061	8.443	8.855	7.207
<b>120</b>	5.560	4.324	2.265	6.795	9.267	7.413	7.207	6.795	7.825	6.384
<b>125</b>	3.913	1.647	2.059	3.707	7.207	6.384	3.295	5.148	5.972	5.560
<b>130</b>	1.441	1.647	1.647	2.677	7.001	4.530	2.059	1.647	2.883	1.441
<b>135</b>	1.647	1.236	1.647	2.471	3.501	2.471	1.853	1.853	1.647	1.647
<b>140</b>	1.647	1.853	1.647	2.059	2.883	2.471	1.647	1.853	1.647	1.853
<b>145</b>	1.647	1.853	1.647	1.853	2.471	2.059	2.059	1.647	2.059	2.059
<b>150</b>	1.853	2.059	2.059	2.059	2.059	1.647	2.059	2.059	2.059	2.059
<b>155</b>	1.853	2.059	1.853	2.059	2.059	1.853	1.853	2.059	2.059	2.265
<b>160</b>	2.059	1.853	2.059	1.853	2.059	2.059	2.059	2.059	2.059	2.059
<b>165</b>	2.059	2.059	2.059	1.853	1.853	2.059	1.853	2.059	2.059	2.059
<b>170</b>	2.059	2.059	2.059	1.853	1.647	2.059	2.059	2.059	1.853	2.059
<b>175</b>	2.059	2.059	2.059	2.059	1.853	2.059	2.059	2.059	2.059	1.853
<b>180</b>	1.926	1.926	1.926	1.926	1.926	1.926	1.926	1.926	1.926	1.926

**Vert. Angles Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
<b>0</b>	1466.847	1466.847	1466.847	1466.847	1466.847	1466.847	1466.847
<b>5</b>	1463.079	1461.432	1482.848	1452.989	1450.724	1458.961	1464.109
<b>10</b>	1455.254	1459.579	1488.202	1430.750	1448.253	1452.577	1440.016
<b>15</b>	1440.840	1449.077	1449.077	1381.946	1379.887	1394.507	1400.067
<b>20</b>	1392.448	1434.868	1363.001	1346.115	1317.492	1335.819	1370.620
<b>25</b>	1300.813	1352.293	1313.168	1308.432	1296.488	1285.780	1323.670
<b>30</b>	1287.016	1285.780	1243.154	1167.993	1231.211	1234.300	1222.974
<b>35</b>	1250.979	1224.003	1160.167	1131.956	1143.900	1138.752	1130.515
<b>40</b>	1174.376	1135.251	1058.236	1045.880	1024.876	1029.613	1035.378
<b>45</b>	1041.556	1035.172	933.653	927.063	911.619	892.674	911.413
<b>50</b>	938.183	926.240	790.537	788.477	783.329	763.355	764.384
<b>55</b>	809.276	793.831	645.979	643.714	637.742	666.365	626.416
<b>60</b>	671.719	662.659	499.980	516.454	498.950	503.687	483.094

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**CANDELA TABULATION - (Cont.)**

<b>65</b>	519.954	532.516	380.751	379.721	383.428	374.779	391.253
<b>70</b>	415.140	408.138	273.877	276.760	268.523	289.115	279.231
<b>75</b>	306.825	296.734	181.830	183.477	192.538	188.831	187.184
<b>80</b>	204.069	202.834	103.991	105.638	107.903	100.902	104.197
<b>85</b>	129.319	119.435	37.684	37.066	34.389	32.742	27.800
<b>90</b>	54.158	51.069	11.532	14.003	13.385	16.474	14.003
<b>95</b>	13.179	14.003	10.502	10.296	10.502	12.149	13.797
<b>100</b>	10.502	11.120	0.412	2.883	7.207	9.884	10.914
<b>105</b>	7.413	2.471	5.148	4.530	7.619	9.267	10.914
<b>110</b>	6.590	4.530	4.942	4.324	7.001	8.443	9.267
<b>115</b>	5.560	4.736	4.324	3.089	3.913	5.972	7.207
<b>120</b>	4.118	3.501	3.295	2.883	1.647	4.736	5.560
<b>125</b>	2.059	3.501	1.853	2.059	1.441	1.441	3.913
<b>130</b>	1.647	2.471	1.647	1.647	1.441	1.441	1.441
<b>135</b>	1.647	2.265	1.236	1.441	1.647	1.647	1.647
<b>140</b>	1.647	2.059	1.030	1.441	1.853	1.647	1.647
<b>145</b>	2.059	2.059	1.236	1.647	1.853	1.853	1.647
<b>150</b>	2.059	2.059	1.236	2.059	1.853	1.647	1.853
<b>155</b>	1.853	2.059	1.030	2.059	2.059	1.853	1.853
<b>160</b>	2.059	2.059	1.441	1.853	1.853	1.853	2.059
<b>165</b>	2.059	2.059	1.441	2.059	1.853	2.059	2.059
<b>170</b>	2.059	2.059	1.441	1.853	1.853	2.059	2.059
<b>175</b>	1.853	2.059	1.236	2.059	1.853	2.059	2.059
<b>180</b>	1.926	1.926	1.926	1.926	1.926	1.926	1.926

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	544.80	13.00	13.00
0-30	1160.03	27.70	27.70
0-40	1907.93	45.60	45.60
0-60	3319.6	79.30	79.30
0-80	4047.11	96.60	96.60
0-90	4144.3	98.90	98.90
10-90	4003.93	95.60	95.60
20-40	1363.13	32.50	32.50
20-50	2122.19	50.70	50.70
40-70	1873.16	44.70	44.70
60-80	727.51	17.40	17.40
70-80	266.02	6.40	6.40
80-90	97.19	2.30	2.30
90-110	29.93	0.70	0.70
90-120	36.45	0.90	0.90
90-130	39.78	0.90	0.90
90-150	42.49	1.00	1.00
90-180	44.13	1.10	1.10
110-180	14.20	0.30	0.30
0-180	4188.43	100.00	100.00

Total Luminaire Efficiency = 100.00%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	140.37
10-20	404.42
20-30	615.23
30-40	747.90
40-50	759.06
50-60	652.61
60-70	461.49
70-80	266.02
80-90	97.19
90-100	20.40
100-110	9.53
110-120	6.52
120-130	3.33
130-140	1.53
140-150	1.18
150-160	0.90
160-170	0.56
170-180	0.19

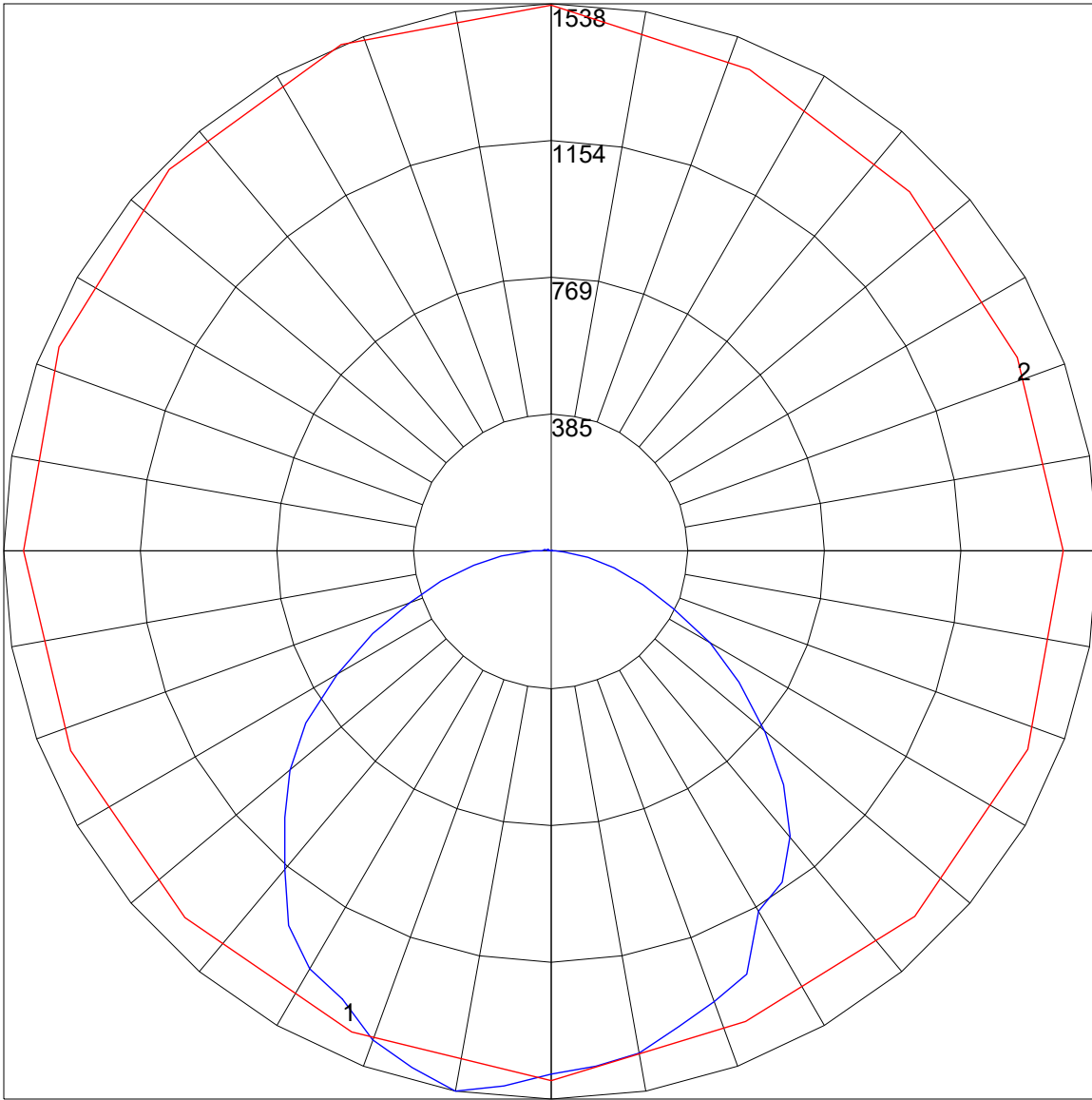
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	119	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	109	104	99	96		106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	91	84	78		96	89	82	77	85	80	75	81	77	73	78	75	71	69
3	90	80	72	65		88	78	71	64	75	69	63	72	67	62	69	65	61	59
4	83	71	62	55		80	69	61	55	67	60	54	64	58	53	62	57	52	50
5	76	63	54	48		74	62	54	47	60	52	47	58	51	46	56	50	46	43
6	70	57	48	42		68	56	48	41	54	47	41	52	46	41	51	45	40	38
7	65	52	43	37		63	51	43	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33		59	46	38	33	45	38	32	44	37	32	42	36	32	30
9	57	43	35	30		55	43	35	29	41	34	29	40	34	29	39	33	29	27
10	53	40	32	27		52	39	32	27	38	31	27	37	31	26	36	30	26	24

POLAR GRAPH



Maximum Candela = 1538.035 Located At Horizontal Angle = 112.5, Vertical Angle = 10  
# 1 - Vertical Plane Through Horizontal Angles (112.5 - 292.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (10) (Through Max. Cd.)