



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : CLRM4-FS1-UNV-30W-3500K.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] LED-13300  
 [TESTLAB] LSI INDUSTRIES, INC.  
 [ISSUEDATE] 04/06/22  
 [TESTDATE] 03/11/22  
 [MANUFAC] LSI INDUSTRIES, INC.  
 [LUMCAT] CLRM4-FS1-UNV-30W-3500K  
 [OTHER] TEST PROCEDURE: IESNA LM-79-19  
 [ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED  
 [OTHER] SCALED FROM ORIGINAL TEST DATA  
 [SEARCH\_SOURCETYPE] LED  
 [SEARCH\_APPLICATION] Indoor  
 [SEARCH\_COLORTEMP] 3500

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3541
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	30
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	2.96
Spacing Criterion (Diagonal)	2.54
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.83 ft
Luminous Width (90-270)	0.02 ft
Luminous Height	0.33 ft



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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	23593	7533	6753
55	20048	6598	5541
65	15397	5672	4462
75	10998	4872	3648
85	7232	4306	3105

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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>
0.0	195	195	195	195	195	195	195	195	195	195
2.5	189	166	156	141	138	146	157	167	191	214
5.0	186	143	112	106	111	107	111	143	191	249
7.5	184	118	129	154	162	157	133	118	191	220
10.0	181	106	164	209	231	211	164	107	189	224
12.5	178	127	204	246	273	249	206	129	188	285
15.0	174	151	236	285	308	291	240	155	185	328
17.5	171	162	277	337	348	343	281	166	183	303
20.0	165	175	291	379	395	384	294	177	180	327
22.5	160	204	331	408	443	412	339	208	177	376
25.0	155	219	355	443	480	453	366	223	174	351
27.5	149	226	377	478	511	488	387	231	168	349
30.0	144	250	407	509	540	519	419	255	164	384
32.5	137	255	421	527	558	539	432	261	158	376
35.0	131	258	443	546	575	554	454	262	154	366
37.5	124	275	456	560	587	569	466	279	147	382
40.0	117	278	466	568	593	577	478	286	141	371
42.5	110	281	476	572	595	581	486	285	135	362
45.0	101	292	479	573	594	581	489	294	127	367
47.5	95	291	483	570	588	577	493	297	121	359
50.0	87	293	483	564	580	572	491	296	114	348
52.5	80	297	482	556	571	563	488	300	107	345
55.0	72	295	477	546	557	550	483	301	99	336
57.5	63	296	472	534	543	538	478	299	92	332
60.0	57	294	464	518	527	522	469	297	84	325
62.5	50	291	457	503	510	507	461	294	75	318
65.0	43	288	447	487	491	490	451	290	65	310
67.5	37	284	435	471	473	474	441	286	56	305
70.0	31	279	425	455	455	457	429	281	47	296
72.5	25	273	414	441	439	442	417	275	39	288
75.0	21	268	404	427	424	427	407	270	31	285
77.5	16	263	394	413	408	412	396	263	24	278
80.0	13	258	384	400	394	399	386	258	18	270
82.5	9	254	374	385	381	386	375	252	13	264
85.0	7	250	364	374	369	374	364	247	8	263
87.5	4	245	356	363	359	363	355	242	5	255
90.0	3	240	347	353	347	352	345	235	2	244
92.5	3	237	341	345	339	347	337	230	1	244
95.0	2	235	335	339	333	337	331	226	1	245
97.5	1	231	331	333	326	331	325	222	1	242
100.0	1	231	328	329	322	326	319	218	1	239
102.5	1	235	336	339	331	335	326	221	1	242
105.0	1	235	338	342	335	338	328	221	1	242
107.5	1	232	338	344	337	339	328	219	1	237
110.0	1	228	337	345	340	341	328	214	1	232
112.5	1	223	336	347	343	343	327	209	1	228
115.0	1	219	335	349	345	345	326	205	1	223
117.5	1	212	333	351	348	346	325	200	1	216
120.0	1	207	331	352	350	347	323	195	1	208
122.5	1	201	327	355	353	348	319	189	1	200
125.0	1	195	322	356	356	350	315	184	1	191
127.5	1	188	318	356	358	349	311	177	1	181
130.0	1	181	311	352	357	347	305	170	1	167
132.5	1	174	305	350	356	344	298	162	1	152

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**CANDELA TABULATION - (Cont.)**

135.0	1	164	298	346	353	340	291	153	1	141
137.5	1	153	288	341	349	335	282	143	1	130
140.0	1	139	279	334	344	328	272	130	1	114
142.5	1	123	266	325	337	319	260	114	1	95
145.0	1	105	253	314	328	308	247	97	1	78
147.5	1	87	237	301	316	296	233	82	1	65
150.0	1	72	214	286	301	280	215	68	1	50
152.5	1	59	190	266	283	261	194	58	1	35
155.0	1	48	161	247	263	241	171	49	2	19
157.5	1	37	131	223	240	217	139	39	1	2
160.0	1	25	94	193	209	186	107	28	1	1
162.5	1	15	68	150	174	142	84	13	1	1
165.0	1	4	54	105	123	105	64	1	1	1
167.5	1	0	37	68	88	77	45	1	1	1
170.0	1	0	21	51	61	51	22	1	1	1
172.5	1	0	0	24	33	23	1	1	1	1
175.0	1	0	0	0	0	1	1	1	1	1
177.5	1	0	0	0	0	0	1	1	1	1
180.0	0	0	0	0	0	0	0	0	0	0

**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>
0.0	195	195	195	195	195	195	195
2.5	230	242	243	242	234	219	189
5.0	214	229	242	228	216	249	186
7.5	307	316	308	322	298	219	184
10.0	310	400	392	402	310	221	181
12.5	398	420	451	418	392	286	178
15.0	383	453	492	453	378	322	174
17.5	446	504	520	504	442	297	171
20.0	457	547	552	546	459	335	165
22.5	483	565	577	567	477	370	160
25.0	511	573	594	574	507	343	155
27.5	510	580	593	577	504	357	149
30.0	525	579	588	575	514	380	144
32.5	520	571	576	569	513	365	137
35.0	517	558	557	556	507	367	131
37.5	512	541	536	538	501	374	124
40.0	501	520	510	516	489	363	117
42.5	488	495	484	492	477	360	110
45.0	473	473	460	471	462	358	101
47.5	458	453	439	448	448	348	95
50.0	445	432	418	427	435	342	87
52.5	431	412	398	407	422	336	80
55.0	415	393	380	388	406	331	72
57.5	402	377	366	374	394	328	63
60.0	388	363	352	360	381	320	57
62.5	376	350	339	347	370	313	50
65.0	365	337	329	334	359	307	43
67.5	352	327	319	323	346	300	37
70.0	341	318	311	315	336	291	31
72.5	332	311	304	307	328	285	25
75.0	324	302	297	298	320	281	21
77.5	316	293	289	289	311	274	16
80.0	308	285	284	283	303	266	13

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**CANDELA TABULATION - (Cont.)**

82.5	301	280	280	279	297	261	9
85.0	296	277	273	275	293	257	7
87.5	289	270	266	268	285	245	4
90.0	284	266	262	265	281	238	3
92.5	283	264	261	262	278	241	3
95.0	281	260	259	258	274	238	2
97.5	277	257	256	255	270	231	1
100.0	279	260	262	263	277	231	1
102.5	291	274	271	272	287	234	1
105.0	295	278	274	276	289	232	1
107.5	298	280	276	278	292	226	1
110.0	300	283	278	280	294	222	1
112.5	303	286	281	284	297	218	1
115.0	305	290	284	287	298	211	1
117.5	304	294	287	290	297	204	1
120.0	304	296	289	293	297	197	1
122.5	304	300	293	297	297	187	1
125.0	303	303	297	299	297	176	1
127.5	301	306	300	302	294	165	1
130.0	297	309	304	305	290	150	1
132.5	293	312	308	307	286	141	1
135.0	288	314	311	308	280	133	1
137.5	279	313	312	308	271	119	1
140.0	270	311	313	306	260	101	1
142.5	258	307	311	301	246	83	1
145.0	241	299	307	293	229	68	1
147.5	219	288	299	280	202	51	1
150.0	185	274	287	263	183	41	1
152.5	169	250	265	241	165	23	1
155.0	138	220	240	211	138	5	1
157.5	103	192	206	187	105	1	1
160.0	73	162	181	156	79	1	1
162.5	53	119	140	112	53	1	1
165.0	29	79	97	79	24	1	1
167.5	0	46	62	44	0	1	1
170.0	0	1	19	0	0	1	1
172.5	0	0	0	0	0	0	1
175.0	0	0	0	0	0	0	1
177.5	0	0	0	0	0	0	1
180.0	0	0	0	0	0	0	0

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	106.68	N.A.	3.00
0-30	289.10	N.A.	8.20
0-40	556.07	N.A.	15.70
0-60	1211.94	N.A.	34.20
0-80	1862.47	N.A.	52.60
0-90	2154.61	N.A.	60.80
10-90	2135.05	N.A.	60.30
20-40	449.39	N.A.	12.70
20-50	767.25	N.A.	21.70
40-70	990.27	N.A.	28.00
60-80	650.52	N.A.	18.40
70-80	316.13	N.A.	8.90
80-90	292.14	N.A.	8.20
90-110	534.39	N.A.	15.10
90-120	783.60	N.A.	22.10
90-130	1004.39	N.A.	28.40
90-150	1307.99	N.A.	36.90
90-180	1386.84	N.A.	39.20
110-180	852.45	N.A.	24.10
0-180	3541.44	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	19.55
10-20	87.13
20-30	182.42
30-40	266.97
40-50	317.86
50-60	338.02
60-70	334.39
70-80	316.13
80-90	292.14
90-100	269.90
100-110	264.49
110-120	249.21
120-130	220.79
130-140	179.46
140-150	124.14
150-160	62.87
160-170	15.47
170-180	0.50

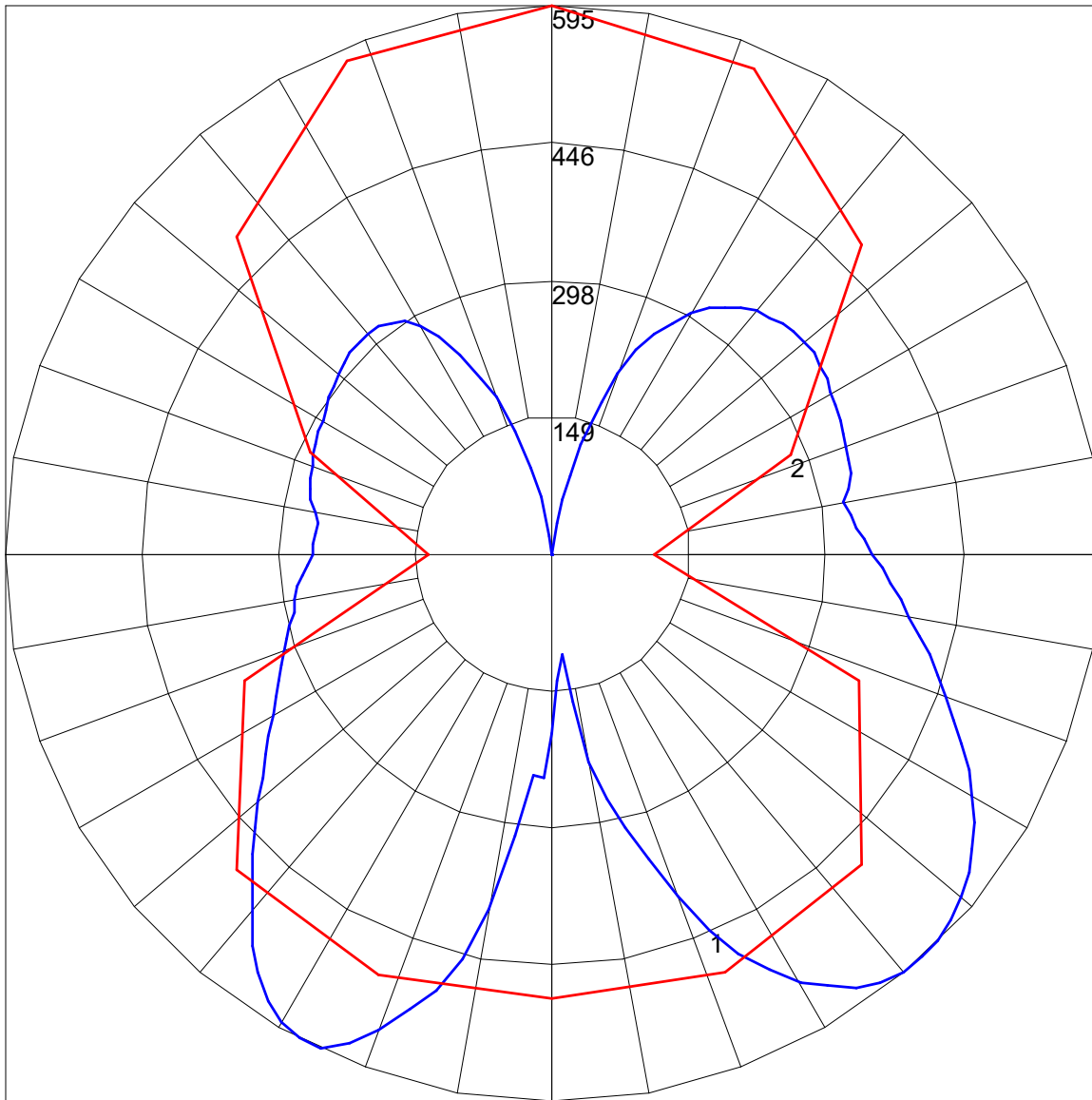
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	61
1	96	90	85	80	89	84	79	75	72	69	65	62	59	56	52	50	48	43
2	86	76	68	62	79	71	64	58	61	55	51	52	48	44	43	40	37	33
3	77	66	57	49	71	61	53	46	52	46	41	44	39	35	37	33	30	26
4	70	57	48	41	65	53	45	38	46	39	33	39	33	29	32	28	24	21
5	64	50	41	34	59	47	38	32	40	33	28	34	29	24	29	24	20	17
6	59	45	35	29	54	42	33	27	36	29	24	31	25	21	25	21	17	14
7	54	40	31	25	50	37	29	23	32	25	21	27	22	18	23	18	15	12
8	50	36	27	22	46	34	26	20	29	23	18	25	19	15	21	16	13	11
9	46	33	24	19	43	31	23	18	27	20	16	23	17	14	19	15	12	9
10	43	30	22	17	40	28	21	16	24	18	14	21	16	12	18	13	10	8

POLAR GRAPH



Maximum Candela = 595 Located At Horizontal Angle = 90, Vertical Angle = 42.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (42.5) (Through Max. Cd.)