



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : CLRT14-FS1-UNV-20W-3500K.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] LED-14649

[TESTLAB] LSI INDUSTRIES, INC.

[TESTDATE] 03/08/24

[ISSUEDATE] 04/15/24

[MANUFAC] LSI INDUSTRIES, INC.

[LUMCAT] CLRT14-FS1-UNV-20W-3500K

[TEST PROCEDURE] IESNA LM-79-19

[\_ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

[\_FACTORED] SCALED FROM ORIGINAL TEST DATA

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor

[\_SEARCH\_COLORTEMP] 4000

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2224
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	19.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.52
Spacing Criterion (90-270)	1.52
Spacing Criterion (Diagonal)	1.68
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	1.00 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1699	1714	1791
55	1953	2040	2331
65	2225	2305	2948
75	2321	2603	3724
85	2577	2907	4525

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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>
<b>0.0</b>	479.898	479.898	479.898	479.898	479.898
<b>2.5</b>	487.669	482.812	480.869	478.926	475.041
<b>5.0</b>	490.584	484.755	482.812	480.869	477.955
<b>7.5</b>	492.527	487.669	485.727	483.784	480.869
<b>10.0</b>	494.470	488.641	485.727	483.784	481.841
<b>12.5</b>	495.441	488.641	482.812	481.841	480.869
<b>15.0</b>	494.470	487.669	479.898	480.869	479.898
<b>17.5</b>	491.555	484.755	476.983	479.898	477.955
<b>20.0</b>	487.669	483.784	476.012	478.926	474.069
<b>22.5</b>	483.784	481.841	476.983	476.983	469.212
<b>25.0</b>	480.869	480.869	476.983	476.012	468.240
<b>27.5</b>	477.955	477.955	473.098	474.069	470.183
<b>30.0</b>	476.012	475.041	468.240	472.126	471.155
<b>32.5</b>	475.041	469.212	462.412	468.240	469.212
<b>35.0</b>	472.126	463.383	459.497	463.383	468.240
<b>37.5</b>	468.240	458.526	459.497	462.412	469.212
<b>40.0</b>	462.412	454.640	459.497	466.297	468.240
<b>42.5</b>	455.611	451.726	456.583	470.183	468.240
<b>45.0</b>	446.868	446.868	450.754	472.126	471.155
<b>47.5</b>	439.097	440.068	444.925	472.126	480.869
<b>50.0</b>	431.325	431.325	442.011	474.069	489.612
<b>52.5</b>	424.525	420.639	440.068	476.983	496.412
<b>55.0</b>	416.753	409.953	435.211	476.012	497.384
<b>57.5</b>	407.039	398.296	424.525	470.183	497.384
<b>60.0</b>	393.438	385.667	408.010	461.440	491.555
<b>62.5</b>	374.009	369.152	386.638	449.783	478.926
<b>65.0</b>	349.723	346.809	362.352	433.268	463.383
<b>67.5</b>	320.579	320.579	338.066	408.010	442.983
<b>70.0</b>	289.493	291.436	311.836	380.810	422.582
<b>72.5</b>	256.464	260.349	282.693	352.637	392.467
<b>75.0</b>	223.434	227.320	250.635	319.608	358.466
<b>77.5</b>	190.405	193.319	215.663	283.664	315.722
<b>80.0</b>	156.404	158.347	176.804	238.977	268.121
<b>82.5</b>	120.460	122.403	136.003	190.405	211.777
<b>85.0</b>	83.545	81.602	94.231	133.089	146.689
<b>87.5</b>	42.744	41.772	49.544	68.973	73.830
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	183.22	N.A.	8.20
0-30	403.68	N.A.	18.10
0-40	695.85	N.A.	31.30
0-60	1446.17	N.A.	65.00
0-80	2111.98	N.A.	95.00
0-90	2224.29	N.A.	100.00
10-90	2178.03	N.A.	97.90
20-40	512.64	N.A.	23.00
20-50	866.50	N.A.	39.00
40-70	1131.18	N.A.	50.90
60-80	665.81	N.A.	29.90
70-80	284.95	N.A.	12.80
80-90	112.31	N.A.	5.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2224.29	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	46.26
10-20	136.96
20-30	220.46
30-40	292.17
40-50	353.87
50-60	396.45
60-70	380.86
70-80	284.95
80-90	112.31
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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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	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	106	100	94	89	103	97	92	88	93	89	85	89	86	82	85	82	80	78
2	94	84	76	69	91	82	75	68	79	72	67	75	70	65	72	67	63	61
3	85	72	63	55	82	71	62	55	67	60	53	65	58	52	62	56	51	49
4	77	63	53	45	74	61	52	45	59	51	44	56	49	43	54	48	43	40
5	70	55	45	38	68	54	45	37	52	43	37	50	42	37	48	41	36	34
6	64	49	39	32	62	48	39	32	46	38	32	45	37	31	43	36	31	29
7	59	44	35	28	57	43	34	28	42	34	27	40	33	27	39	32	27	25
8	55	40	31	24	53	39	31	24	38	30	24	37	29	24	35	29	24	22
9	51	37	28	22	50	36	27	22	35	27	21	34	26	21	33	26	21	19
10	48	34	25	19	46	33	25	19	32	24	19	31	24	19	30	24	19	17

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**UGR TABLE - CORRECTED**

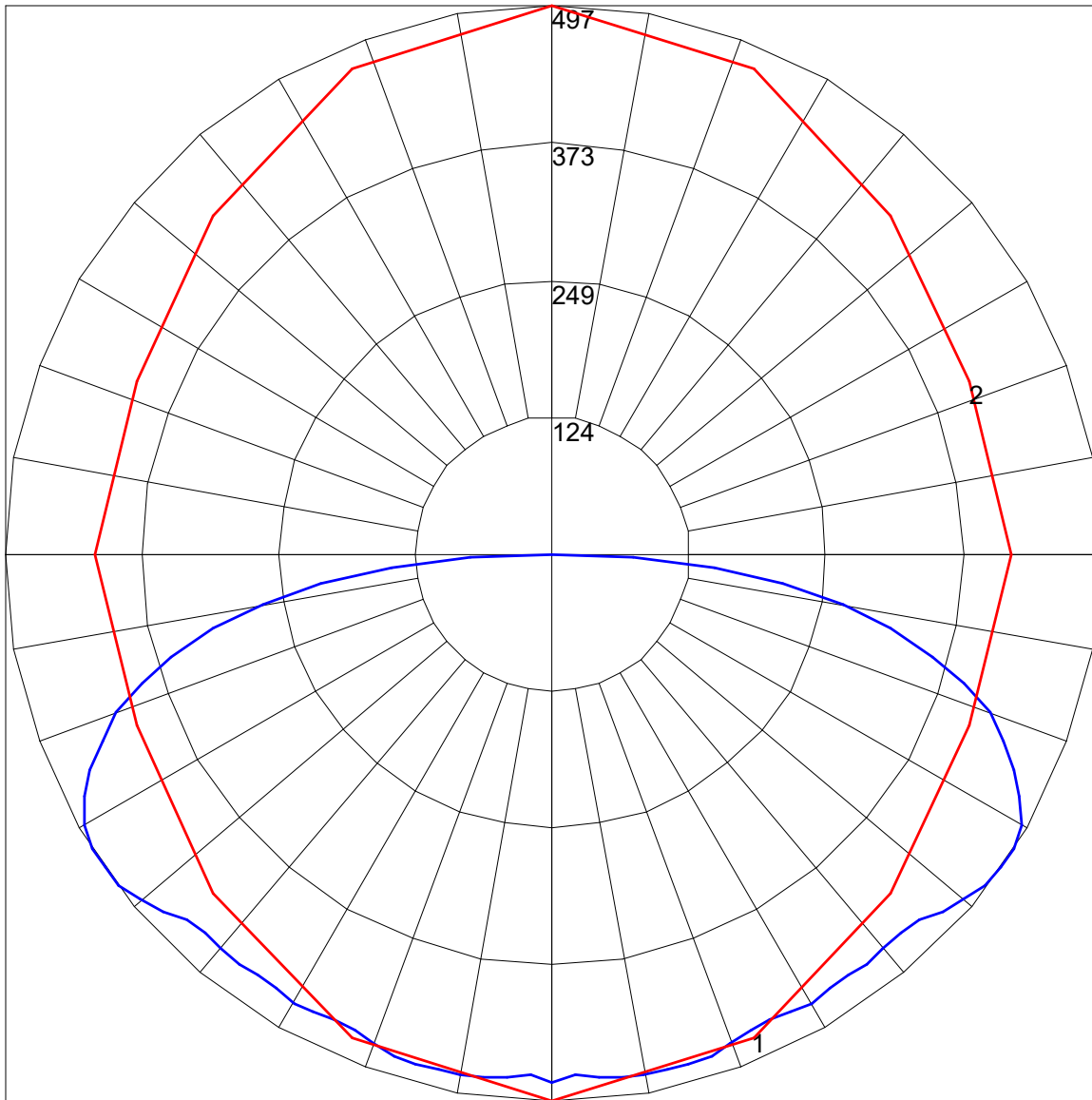
Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	14.7	16.5	15.1	16.8	17.1	15.9	17.7	16.3	18.0	18.4
	3H	17.2	18.9	17.6	19.2	19.6	18.9	20.6	19.3	20.9	21.3
	4H	18.2	19.8	18.6	20.2	20.5	20.3	21.9	20.7	22.2	22.6
	6H	19.1	20.6	19.5	21.0	21.3	21.5	23.0	21.9	23.4	23.8
	8H	19.5	20.9	19.9	21.3	21.7	22.0	23.4	22.4	23.8	24.2
	12H	19.7	21.1	20.2	21.5	21.9	22.4	23.8	22.9	24.2	24.6
4H	2H	15.6	17.2	16.0	17.6	18.0	16.6	18.2	16.9	18.5	18.9
	3H	18.4	19.7	18.8	20.1	20.5	19.8	21.2	20.2	21.6	22.0
	4H	19.5	20.8	20.0	21.2	21.6	21.4	22.6	21.8	23.0	23.5
	6H	20.5	21.6	21.0	22.1	22.5	22.8	23.9	23.2	24.3	24.8
	8H	20.9	22.0	21.4	22.4	22.9	23.4	24.4	23.8	24.9	25.3
	12H	21.3	22.2	21.8	22.7	23.2	23.9	24.8	24.4	25.3	25.8
8H	4H	20.2	21.2	20.6	21.6	22.1	21.7	22.8	22.2	23.2	23.7
	6H	21.3	22.2	21.8	22.7	23.2	23.3	24.2	23.8	24.7	25.2
	8H	21.8	22.6	22.3	23.1	23.6	24.1	24.9	24.6	25.4	25.8
	12H	22.3	23.0	22.8	23.5	24.0	24.7	25.4	25.2	25.9	26.5
12H	4H	20.3	21.3	20.8	21.7	22.2	21.8	22.7	22.3	23.2	23.7
	6H	21.6	22.4	22.1	22.8	23.3	23.4	24.2	24.0	24.7	25.2
	8H	22.1	22.8	22.6	23.3	23.9	24.2	24.9	24.7	25.4	26.0

Maximum UGR = 26.5

POLAR GRAPH



Maximum Candela = 497.384 Located At Horizontal Angle = 90, Vertical Angle = 55  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (55) (Through Max. Cd.)