



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-14-L28-840-AF-(L20)-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 20224.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 02-AUG-2023  
 [MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 1x4 RECESSED LED LUMINAIRE  
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CENTER LENS  
 [MORE] 0-10V DIMMING DRIVER  
 [LUMCAT] LT-14-L28-840-AF-(L20)-DIM-UNV  
 [LAMPCAT] HLMX 80 CRI 4000K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2081
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	15.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.92 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1976	2038	2152
55	1816	1990	2153
65	1582	1945	2060
75	1195	1735	1822
85	515	845	716

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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</b>	723.808	723.808	723.808	723.808	723.808
<b>5</b>	735.059	721.308	717.557	715.474	713.807
<b>10</b>	722.558	710.057	707.973	706.723	704.640
<b>15</b>	705.473	695.056	692.972	695.056	692.139
<b>20</b>	677.554	668.804	668.804	672.554	672.554
<b>25</b>	645.468	638.801	642.135	648.385	648.802
<b>30</b>	609.215	602.548	609.632	619.633	619.633
<b>35</b>	568.379	563.378	570.879	585.880	587.130
<b>40</b>	520.458	519.625	527.959	546.294	550.461
<b>45</b>	466.704	467.537	481.289	503.374	508.374
<b>50</b>	408.783	413.366	432.535	454.620	462.537
<b>55</b>	347.945	359.612	381.281	402.116	412.533
<b>60</b>	287.523	305.441	330.026	347.111	356.695
<b>65</b>	223.351	243.770	274.605	286.273	290.857
<b>70</b>	165.013	189.599	215.434	221.684	227.935
<b>75</b>	103.342	135.011	150.012	148.762	157.513
<b>80</b>	53.754	77.506	85.424	79.590	85.424
<b>85</b>	15.001	26.669	24.585	20.835	20.835
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	264.38	N.A.	12.70
0-30	561.24	N.A.	27.00
0-40	920.56	N.A.	44.20
0-60	1635.2	N.A.	78.60
0-80	2047.62	N.A.	98.40
0-90	2081.1	N.A.	100.00
10-90	2012.72	N.A.	96.70
20-40	656.18	N.A.	31.50
20-50	1030.23	N.A.	49.50
40-70	977.78	N.A.	47.00
60-80	412.42	N.A.	19.80
70-80	149.28	N.A.	7.20
80-90	33.48	N.A.	1.60
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	2081.1	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	68.39
10-20	195.99
20-30	296.87
30-40	359.31
40-50	374.05
50-60	340.59
60-70	263.14
70-80	149.28
80-90	33.48
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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	44	37	32	43	36	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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**UGR TABLE - CORRECTED**

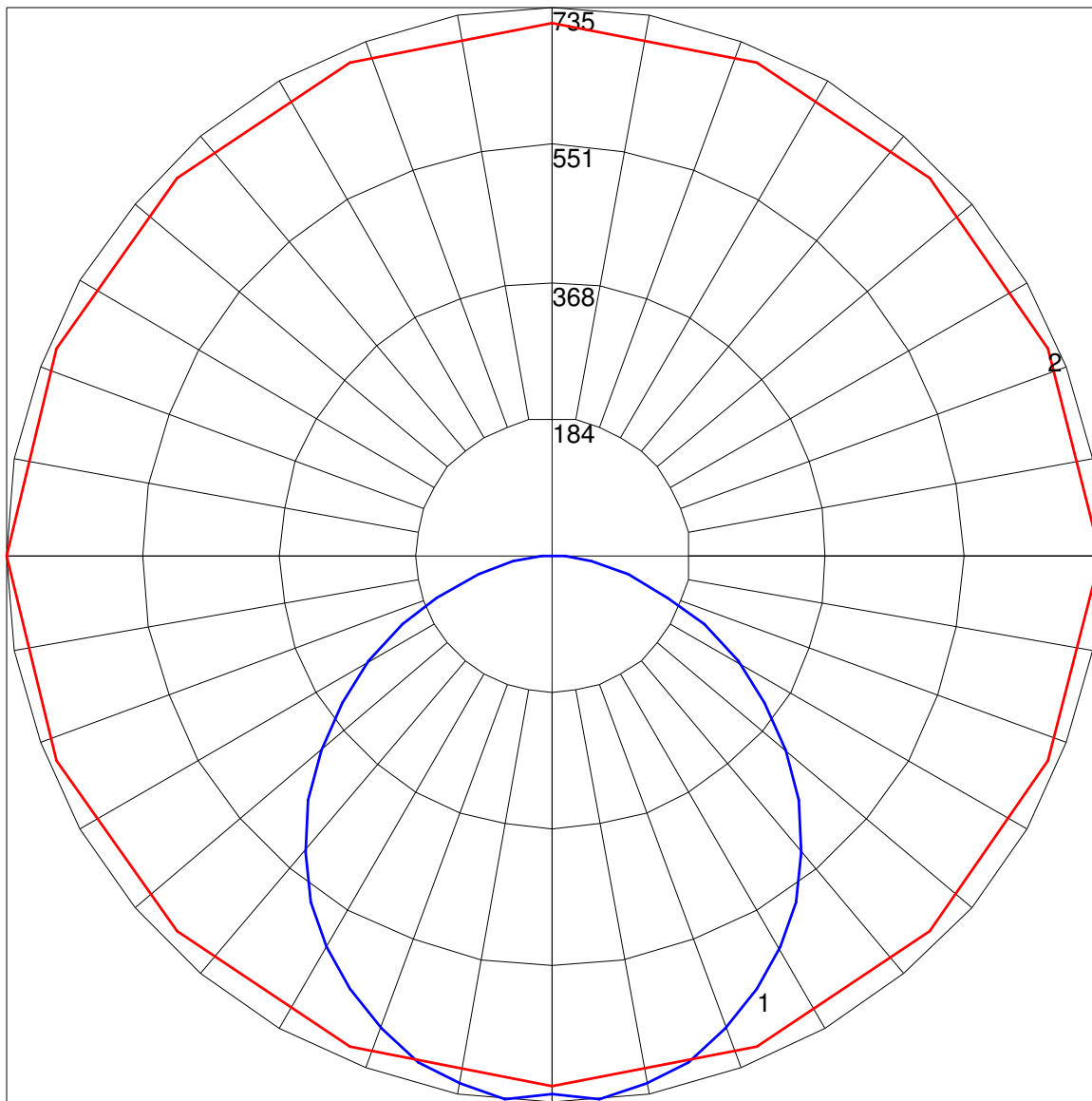
Reflectances

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	14.1	15.7	14.4	16.0	16.4	15.0	16.7	15.4	17.0	17.3
	3H	15.7	17.2	16.1	17.6	17.9	16.9	18.4	17.3	18.8	19.1
	4H	16.3	17.7	16.7	18.0	18.4	17.6	19.0	18.0	19.4	19.8
	6H	16.6	17.9	17.0	18.3	18.7	18.1	19.4	18.5	19.8	20.1
	8H	16.7	17.9	17.1	18.3	18.7	18.2	19.4	18.6	19.8	20.2
	12H	16.7	17.9	17.2	18.3	18.7	18.2	19.4	18.7	19.8	20.2
4H	2H	14.9	16.3	15.3	16.7	17.0	15.6	17.0	16.0	17.4	17.7
	3H	16.8	18.0	17.2	18.4	18.8	17.8	18.9	18.2	19.3	19.7
	4H	17.5	18.6	18.0	19.0	19.4	18.6	19.6	19.0	20.1	20.5
	6H	18.0	18.9	18.4	19.3	19.8	19.1	20.1	19.6	20.5	21.0
	8H	18.1	19.0	18.5	19.4	19.9	19.3	20.1	19.7	20.6	21.1
	12H	18.1	18.9	18.6	19.4	19.9	19.3	20.1	19.8	20.6	21.1
8H	4H	17.9	18.8	18.4	19.2	19.7	18.9	19.7	19.3	20.2	20.6
	6H	18.5	19.3	19.0	19.7	20.2	19.5	20.2	20.0	20.7	21.2
	8H	18.7	19.4	19.2	19.9	20.4	19.7	20.4	20.2	20.9	21.3
	12H	18.8	19.4	19.3	19.9	20.4	19.8	20.4	20.3	20.9	21.4
12H	4H	18.0	18.8	18.4	19.2	19.7	18.9	19.7	19.4	20.1	20.6
	6H	18.6	19.3	19.1	19.7	20.3	19.6	20.2	20.1	20.7	21.2
	8H	18.8	19.4	19.3	19.9	20.5	19.8	20.4	20.3	20.8	21.4

Maximum UGR = 21.4

POLAR GRAPH



Maximum Candela = 735.059 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)