



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-14-L28-935-AF-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] 2023-07-21  
[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-L28-935-AF-DIM-UNV\_  
[LAMPCAT] 22 INCH LED ARRAYS  
[ \_SEARCH\_SOURCETYPE] LED  
[ \_SEARCH\_APPLICATION] INDOOR  
[ \_SEARCH\_MOUNTING] RECESSED

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2336
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	21.4
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	2218	2287	2416
55	2038	2234	2417
65	1776	2183	2313
75	1342	1948	2045
85	578	948	803

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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>	812.369	812.369	812.369	812.369	812.369
<b>5</b>	824.997	809.563	805.354	803.015	801.145
<b>10</b>	810.966	796.936	794.597	793.194	790.856
<b>15</b>	791.791	780.099	777.760	780.099	776.825
<b>20</b>	760.456	750.635	750.635	754.844	754.844
<b>25</b>	724.444	716.961	720.703	727.718	728.186
<b>30</b>	683.756	676.273	684.223	695.448	695.448
<b>35</b>	637.923	632.310	640.729	657.565	658.968
<b>40</b>	584.139	583.203	592.557	613.135	617.812
<b>45</b>	523.807	524.743	540.176	564.964	570.576
<b>50</b>	458.799	463.944	485.457	510.245	519.131
<b>55</b>	390.517	403.612	427.932	451.316	463.008
<b>60</b>	322.703	342.813	370.407	389.582	400.339
<b>65</b>	250.679	273.596	308.205	321.300	326.444
<b>70</b>	185.203	212.797	241.793	248.809	255.824
<b>75</b>	115.986	151.530	168.367	166.964	176.785
<b>80</b>	60.331	86.989	95.875	89.328	95.875
<b>85</b>	16.837	29.932	27.593	23.384	23.384
<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	296.72	N.A.	12.70
0-30	629.92	N.A.	27.00
0-40	1033.19	N.A.	44.20
0-60	1835.28	N.A.	78.60
0-80	2298.16	N.A.	98.40
0-90	2335.73	N.A.	100.00
10-90	2258.98	N.A.	96.70
20-40	736.47	N.A.	31.50
20-50	1156.29	N.A.	49.50
40-70	1097.42	N.A.	47.00
60-80	462.88	N.A.	19.80
70-80	167.55	N.A.	7.20
80-90	37.57	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	2335.73	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	76.75
10-20	219.97
20-30	333.19
30-40	403.28
40-50	419.82
50-60	382.27
60-70	295.34
70-80	167.55
80-90	37.57
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	53	47	73	61	53	47	59	52	46	57	51	45	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	46	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**

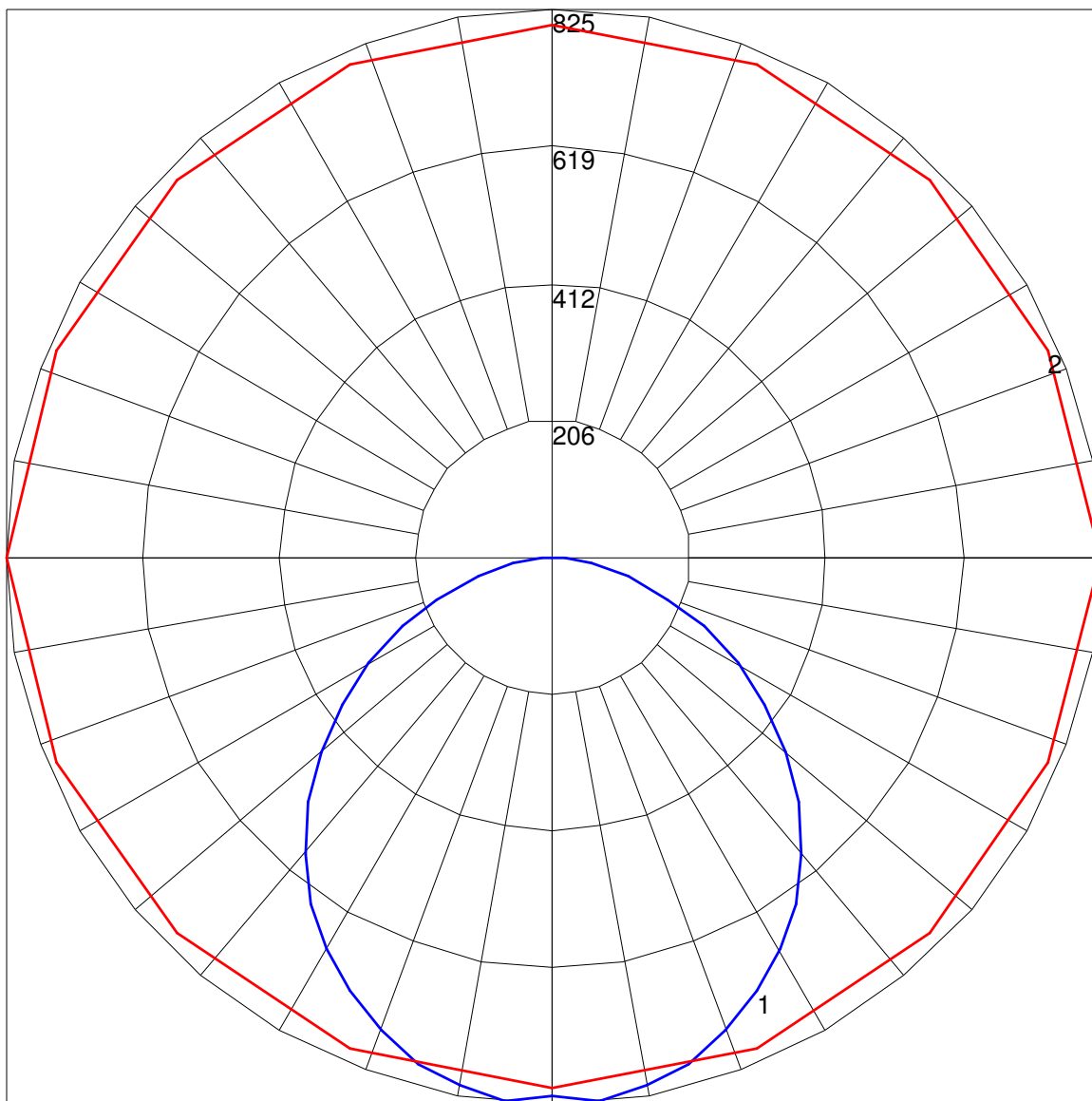
Reflectances

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	14.5	16.1	14.8	16.4	16.8	15.4	17.1	15.8	17.4	17.7
	3H	16.1	17.6	16.5	18.0	18.3	17.3	18.8	17.7	19.2	19.5
	4H	16.7	18.1	17.1	18.4	18.8	18.0	19.4	18.4	19.8	20.2
	6H	17.0	18.3	17.4	18.7	19.1	18.5	19.8	18.9	20.2	20.5
	8H	17.1	18.3	17.5	18.7	19.1	18.6	19.8	19.0	20.2	20.6
	12H	17.1	18.3	17.6	18.7	19.1	18.6	19.8	19.1	20.2	20.6
4H	2H	15.3	16.7	15.7	17.1	17.4	16.0	17.4	16.4	17.8	18.1
	3H	17.2	18.4	17.6	18.8	19.2	18.2	19.3	18.6	19.7	20.1
	4H	17.9	19.0	18.4	19.4	19.8	19.0	20.0	19.4	20.5	20.9
	6H	18.4	19.3	18.8	19.7	20.2	19.5	20.5	20.0	20.9	21.4
	8H	18.5	19.4	18.9	19.8	20.3	19.7	20.5	20.1	21.0	21.5
	12H	18.5	19.3	19.0	19.8	20.3	19.7	20.5	20.2	21.0	21.5
8H	4H	18.3	19.2	18.8	19.6	20.1	19.3	20.1	19.7	20.6	21.0
	6H	18.9	19.7	19.4	20.1	20.6	19.9	20.6	20.4	21.1	21.6
	8H	19.1	19.8	19.6	20.3	20.8	20.1	20.8	20.6	21.3	21.7
	12H	19.2	19.8	19.7	20.3	20.8	20.2	20.8	20.7	21.3	21.8
12H	4H	18.4	19.2	18.8	19.6	20.1	19.3	20.1	19.8	20.5	21.0
	6H	19.0	19.7	19.5	20.1	20.7	20.0	20.6	20.5	21.1	21.6
	8H	19.2	19.8	19.7	20.3	20.9	20.2	20.8	20.7	21.2	21.8

Maximum UGR = 21.8

POLAR GRAPH



Maximum Candela = 824.997 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.)