



IES INDOOR REPORT
PHOTOMETRIC FILENAME : LT-14-L28-840-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-L28-840-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	2899
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	135
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	2752	2838	2998
55	2530	2772	2999
65	2204	2710	2870
75	1665	2417	2538
85	718	1176	997

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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>
0	1008.121	1008.121	1008.121	1008.121	1008.121
5	1023.791	1004.638	999.415	996.513	994.192
10	1006.380	988.968	986.066	984.325	981.423
15	982.584	968.074	965.173	968.074	964.012
20	943.698	931.511	931.511	936.734	936.734
25	899.009	889.723	894.366	903.072	903.652
30	848.516	839.230	849.096	863.026	863.026
35	791.639	784.674	795.121	816.015	817.756
40	724.895	723.734	735.342	760.879	766.682
45	650.026	651.187	670.339	701.099	708.064
50	569.353	575.737	602.435	633.195	644.222
55	484.618	500.868	531.048	560.067	574.577
60	400.462	425.419	459.661	483.457	496.806
65	311.084	339.523	382.471	398.721	405.106
70	229.831	264.073	300.057	308.762	317.468
75	143.934	188.043	208.937	207.196	219.384
80	74.869	107.951	118.978	110.853	118.978
85	20.894	37.144	34.242	29.019	29.019
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	368.22	N.A.	12.70
0-30	781.70	N.A.	27.00
0-40	1282.16	N.A.	44.20
0-60	2277.51	N.A.	78.60
0-80	2851.93	N.A.	98.40
0-90	2898.56	N.A.	100.00
10-90	2803.31	N.A.	96.70
20-40	913.93	N.A.	31.50
20-50	1434.91	N.A.	49.50
40-70	1361.86	N.A.	47.00
60-80	574.42	N.A.	19.80
70-80	207.92	N.A.	7.20
80-90	46.63	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	2898.56	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	95.25
10-20	272.97
20-30	413.48
30-40	500.45
40-50	520.98
50-60	474.38
60-70	366.50
70-80	207.92
80-90	46.63
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	53	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

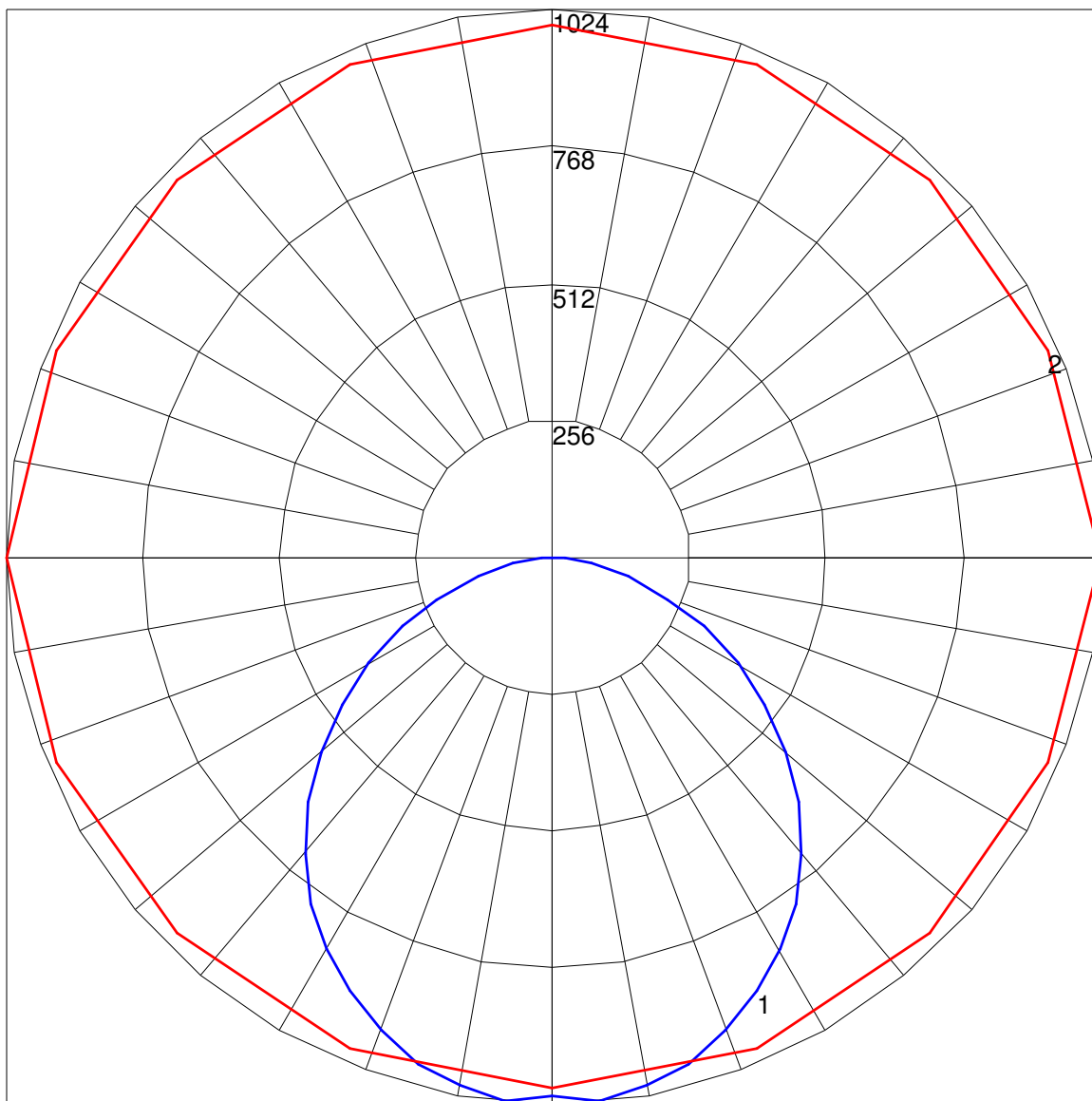
Reflectances

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	15.3	16.9	15.6	17.2	17.6	16.2	17.9	16.6	18.2	18.5
	3H	16.9	18.4	17.3	18.8	19.1	18.1	19.6	18.5	20.0	20.3
	4H	17.5	18.9	17.9	19.2	19.6	18.8	20.2	19.2	20.6	21.0
	6H	17.8	19.1	18.2	19.5	19.9	19.3	20.6	19.7	21.0	21.3
	8H	17.9	19.1	18.3	19.5	19.9	19.4	20.6	19.8	21.0	21.4
	12H	17.9	19.1	18.4	19.5	19.9	19.4	20.6	19.9	21.0	21.4
4H	2H	16.1	17.5	16.5	17.9	18.2	16.8	18.2	17.2	18.6	18.9
	3H	18.0	19.2	18.4	19.6	20.0	19.0	20.1	19.4	20.5	20.9
	4H	18.7	19.8	19.2	20.2	20.6	19.8	20.8	20.2	21.3	21.7
	6H	19.2	20.1	19.6	20.5	21.0	20.3	21.3	20.8	21.7	22.2
	8H	19.3	20.2	19.7	20.6	21.1	20.5	21.4	20.9	21.8	22.3
	12H	19.3	20.1	19.8	20.6	21.1	20.5	21.3	21.0	21.8	22.3
8H	4H	19.1	20.0	19.6	20.4	20.9	20.1	20.9	20.5	21.4	21.8
	6H	19.7	20.5	20.2	20.9	21.4	20.7	21.4	21.2	21.9	22.4
	8H	19.9	20.6	20.4	21.1	21.6	20.9	21.6	21.4	22.1	22.5
	12H	20.0	20.6	20.5	21.1	21.6	21.0	21.6	21.5	22.1	22.6
12H	4H	19.2	20.0	19.6	20.4	20.9	20.1	20.9	20.6	21.3	21.8
	6H	19.8	20.5	20.3	20.9	21.5	20.8	21.4	21.3	21.9	22.4
	8H	20.0	20.6	20.5	21.1	21.7	21.0	21.6	21.5	22.0	22.6

Maximum UGR = 22.6

POLAR GRAPH



Maximum Candela = 1023.791 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.)