



IES INDOOR REPORT
PHOTOMETRIC FILENAME : AT3-22-L50-940-D-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19435.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUE DATE] 06-16-2023
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x2' RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/2 PIECE FROSTED ACRYLIC LENS
[LUMCAT] AT3-22-L50-940-D-DIM-UNV
[LAMPCAT] HLM 90 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4422
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
Total Luminaire Watts	41.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.76 ft
Luminous Width (90-270)	1.77 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4566	4970	5369
55	4015	4535	4874
65	3549	4150	4559
75	2946	3734	4316
85	1584	1404	1332

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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	1740.324	1740.324	1740.324	1740.324	1740.324
5	1736.696	1731.255	1730.348	1729.441	1727.627
10	1697.700	1696.793	1693.165	1704.048	1706.769
15	1639.659	1637.845	1644.193	1666.866	1674.121
20	1551.690	1556.225	1581.618	1614.266	1629.683
25	1443.770	1459.188	1499.998	1545.342	1568.921
30	1332.223	1352.174	1404.774	1464.629	1487.301
35	1210.699	1232.465	1292.320	1358.523	1380.288
40	1074.666	1094.617	1159.007	1221.582	1248.789
45	933.191	956.770	1015.718	1074.666	1097.338
50	798.064	820.736	879.684	936.818	952.235
55	665.658	686.516	751.813	799.878	808.040
60	543.228	564.086	625.755	671.099	674.727
65	433.494	450.725	506.952	546.855	556.831
70	323.760	340.084	393.591	428.959	442.563
75	220.374	237.605	279.322	305.622	322.853
80	122.430	144.196	146.916	146.009	144.196
85	39.903	47.158	35.369	34.462	33.555
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	629.73	N.A.	14.20
0-30	1321.98	N.A.	29.90
0-40	2129.37	N.A.	48.20
0-60	3582.00	N.A.	81.00
0-80	4361.94	N.A.	98.60
0-90	4421.65	N.A.	100.00
10-90	4257.46	N.A.	96.30
20-40	1499.64	N.A.	33.90
20-50	2284.98	N.A.	51.70
40-70	1948.71	N.A.	44.10
60-80	779.94	N.A.	17.60
70-80	283.86	N.A.	6.40
80-90	59.71	N.A.	1.40
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	4421.65	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	164.19
10-20	465.54
20-30	692.25
30-40	807.39
40-50	785.34
50-60	667.29
60-70	496.08
70-80	283.86
80-90	59.71
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	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	63	60
4	84	72	63	57	81	70	62	56	68	61	56	66	60	55	64	58	54	52
5	77	64	56	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34	45	38	34	44	38	33	32
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	28
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26

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UGR TABLE - CORRECTED

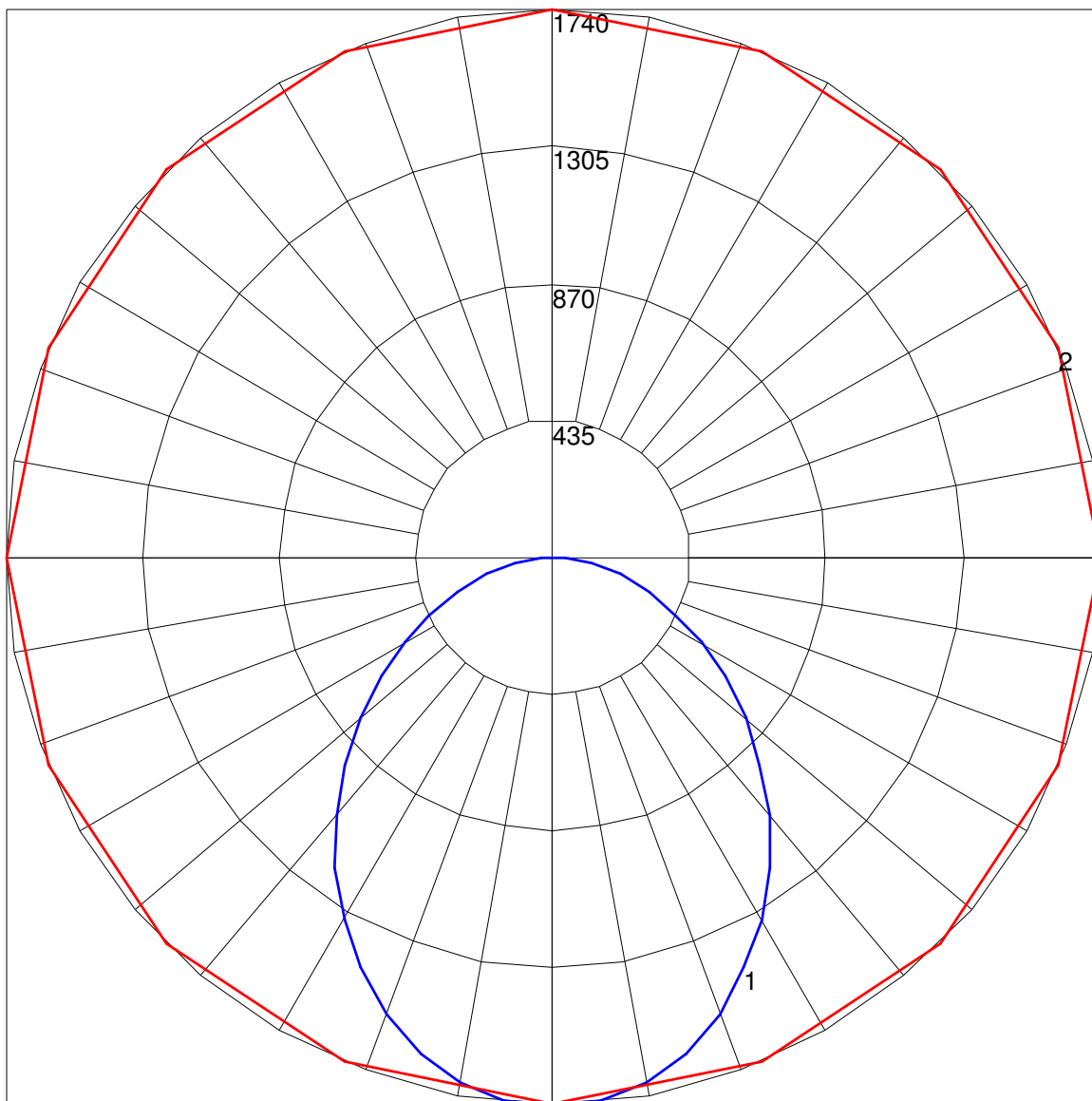
Reflectances

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	16.5	18.1	16.9	18.4	18.7	17.7	19.3	18.1	19.6	19.9
	3H	18.2	19.6	18.5	19.9	20.3	19.6	21.0	20.0	21.4	21.7
	4H	18.8	20.1	19.2	20.5	20.8	20.3	21.7	20.7	22.0	22.4
	6H	19.2	20.4	19.6	20.8	21.2	20.7	22.0	21.2	22.4	22.8
	8H	19.3	20.5	19.7	20.9	21.3	20.8	22.0	21.3	22.4	22.8
	12H	19.3	20.5	19.7	20.8	21.3	20.8	22.0	21.3	22.4	22.8
4H	2H	17.3	18.6	17.7	19.0	19.4	18.2	19.6	18.6	19.9	20.3
	3H	19.2	20.3	19.6	20.7	21.1	20.4	21.5	20.8	21.9	22.3
	4H	19.9	20.9	20.3	21.3	21.7	21.2	22.3	21.7	22.7	23.1
	6H	20.4	21.3	20.8	21.7	22.2	21.8	22.6	22.2	23.1	23.5
	8H	20.5	21.4	21.0	21.8	22.3	21.9	22.7	22.3	23.1	23.6
	12H	20.6	21.4	21.1	21.8	22.3	21.9	22.6	22.4	23.1	23.6
8H	4H	20.3	21.1	20.7	21.5	22.0	21.5	22.3	21.9	22.8	23.2
	6H	20.9	21.6	21.4	22.1	22.6	22.1	22.8	22.6	23.3	23.7
	8H	21.1	21.7	21.6	22.2	22.7	22.2	22.8	22.7	23.3	23.8
	12H	21.2	21.8	21.8	22.3	22.8	22.3	22.8	22.8	23.3	23.9
12H	4H	20.3	21.1	20.8	21.5	22.0	21.5	22.2	22.0	22.7	23.2
	6H	21.0	21.6	21.5	22.1	22.6	22.1	22.7	22.6	23.2	23.7
	8H	21.2	21.8	21.7	22.3	22.8	22.3	22.8	22.8	23.3	23.9

Maximum UGR = 23.9

POLAR GRAPH



Maximum Candela = 1740.324 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)