



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-22-L50-935-D-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18874.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 06/07/2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 2x2' RECESSED LED LUMINAIRE w/WHITE

[MORE] REFL, FROST CONCAVE ACRYLIC LENS w/SHALLOW ACRYLIC CENTER

[LUMCAT] AT1-22-L50-935-D-DIM-UNV

[LAMPCAT] HLM 90 CRI 3500K CCT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Educational, Office, Direct

[_SEARCH_MOUNTING] Ceiling, Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4196
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	87
Total Luminaire Watts	48.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.32
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	4156	4732	5270
55	3681	4426	4893
65	3132	4060	4675
75	2475	3659	4094
85	1247	1603	1470

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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	1628.999	1628.999	1628.999	1628.999	1628.999
5	1624.511	1620.024	1618.902	1620.024	1620.024
10	1587.488	1584.123	1589.732	1596.464	1599.829
15	1528.028	1531.393	1547.100	1565.050	1572.904
20	1441.641	1450.617	1483.152	1517.931	1530.272
25	1346.280	1364.230	1402.375	1458.470	1479.786
30	1240.821	1255.406	1315.989	1378.815	1409.106
35	1107.315	1139.850	1217.261	1292.429	1323.842
40	981.662	1019.807	1090.487	1176.873	1208.286
45	849.278	888.545	967.078	1048.976	1077.024
50	728.113	758.404	852.644	921.080	952.493
55	610.314	645.092	733.723	783.086	811.134
60	499.245	528.415	611.435	658.555	689.968
65	382.568	421.834	495.880	548.609	571.047
70	282.719	324.229	385.934	422.956	442.029
75	185.113	225.502	273.744	300.669	306.279
80	105.459	134.628	148.091	115.556	120.043
85	31.413	39.266	40.388	40.388	37.023
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	589.91	N.A.	14.10
0-30	1238.7	N.A.	29.50
0-40	1997.72	N.A.	47.60
0-60	3389.1	N.A.	80.80
0-80	4140.48	N.A.	98.70
0-90	4196.24	N.A.	100.00
10-90	4042.51	N.A.	96.30
20-40	1407.81	N.A.	33.50
20-50	2155.44	N.A.	51.40
40-70	1872.59	N.A.	44.60
60-80	751.38	N.A.	17.90
70-80	270.18	N.A.	6.40
80-90	55.75	N.A.	1.30
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	4196.24	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	153.72
10-20	436.19
20-30	648.79
30-40	759.02
40-50	747.63
50-60	643.76
60-70	481.20
70-80	270.18
80-90	55.75
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	91	85	79	97	90	84	78	86	81	76	83	79	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	47	57	51	47	45
6	71	58	49	43	69	57	49	43	55	48	42	53	47	42	52	46	41	39
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	57	44	36	31	56	44	36	31	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	38	32	27	26

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UGR TABLE - CORRECTED

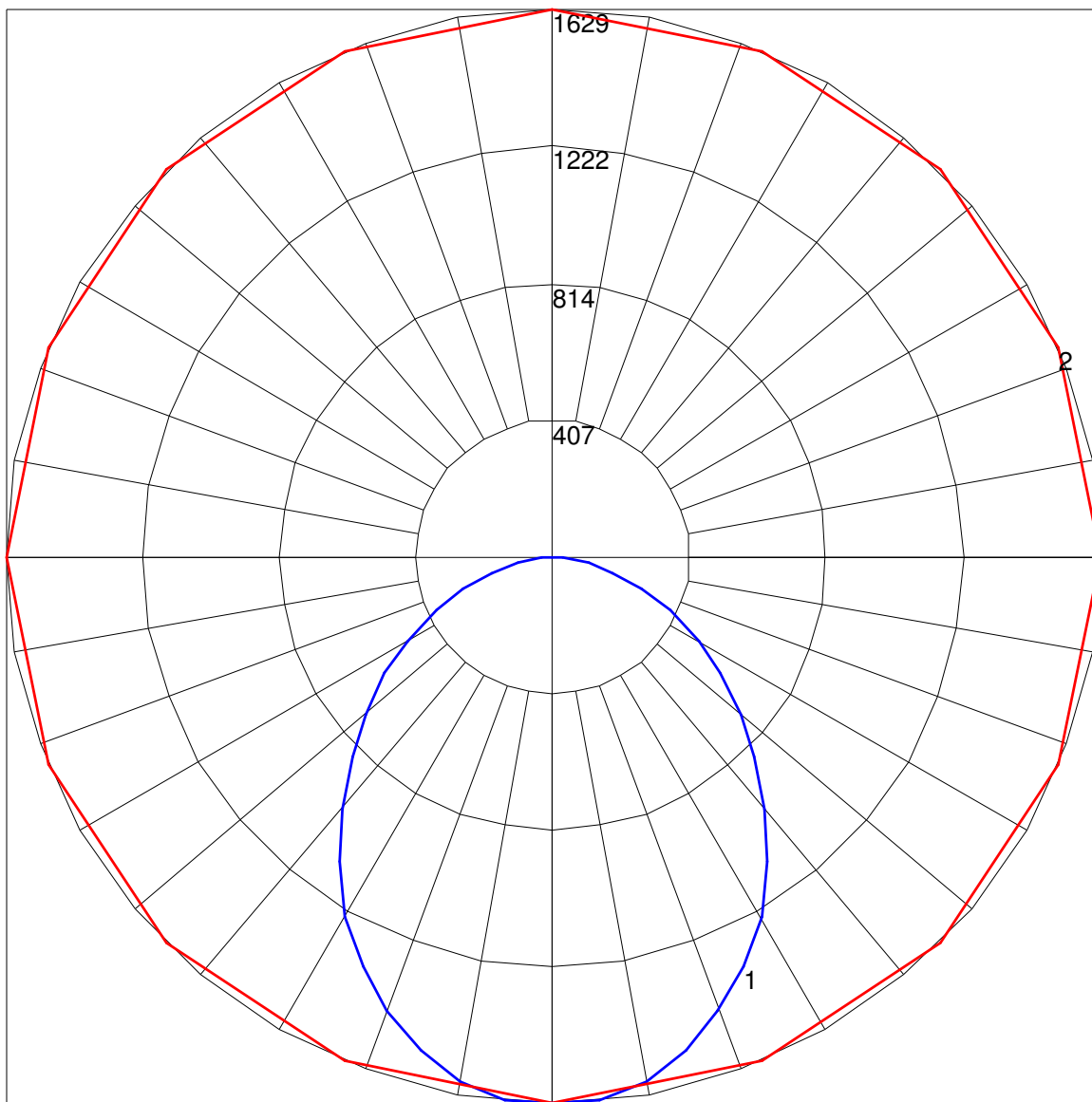
Reflectances

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	16.2	17.8	16.6	18.1	18.4	17.8	19.4	18.1	19.7	20.0
	3H	17.8	19.2	18.1	19.5	19.9	19.7	21.1	20.1	21.5	21.8
	4H	18.3	19.7	18.7	20.0	20.4	20.4	21.8	20.8	22.1	22.5
	6H	18.7	20.0	19.1	20.3	20.7	20.7	22.0	21.1	22.4	22.7
	8H	18.8	20.0	19.2	20.4	20.8	20.8	22.0	21.2	22.4	22.8
	12H	18.8	20.0	19.2	20.4	20.8	20.8	21.9	21.2	22.3	22.8
4H	2H	17.1	18.4	17.5	18.8	19.1	18.3	19.6	18.7	20.0	20.4
	3H	18.9	20.0	19.3	20.4	20.8	20.4	21.6	20.9	22.0	22.4
	4H	19.5	20.6	20.0	21.0	21.4	21.3	22.3	21.7	22.7	23.2
	6H	20.0	20.9	20.5	21.4	21.8	21.7	22.6	22.2	23.0	23.5
	8H	20.2	21.0	20.6	21.4	21.9	21.8	22.6	22.2	23.1	23.5
	12H	20.2	21.0	20.7	21.4	21.9	21.8	22.6	22.3	23.0	23.5
8H	4H	20.0	20.8	20.5	21.3	21.7	21.5	22.4	22.0	22.8	23.3
	6H	20.6	21.3	21.1	21.8	22.3	22.0	22.7	22.5	23.2	23.7
	8H	20.8	21.4	21.3	21.9	22.4	22.1	22.7	22.6	23.2	23.7
	12H	20.9	21.4	21.4	21.9	22.5	22.2	22.7	22.7	23.2	23.8
12H	4H	20.0	20.8	20.5	21.3	21.7	21.5	22.3	22.0	22.8	23.2
	6H	20.7	21.3	21.2	21.8	22.3	22.0	22.7	22.6	23.1	23.7
	8H	20.9	21.4	21.4	21.9	22.5	22.2	22.7	22.7	23.2	23.8

Maximum UGR = 23.8

POLAR GRAPH



Maximum Candela = 1628.999 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.)