



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-22-L30-840-D-(L22)-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] 23-MAR-2023

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-56LED 22"ARRAYS-SERIES 2x2'RECESSED LUMINAIRE w/WHITE

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

[LUMCAT] AT1-22-L30-840-D-(L22)-DIM-UNV

[LAMPCAT] HLM 80 CRI 4000K 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	2270
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	126
Total Luminaire Watts	18
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	2248	2560	2851
55	1992	2394	2647
65	1694	2196	2529
75	1339	1980	2215
85	675	867	795

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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	881.294	881.294	881.294	881.294	881.294
5	878.866	876.438	875.831	876.438	876.438
10	858.837	857.016	860.051	863.692	865.513
15	826.668	828.489	836.986	846.698	850.946
20	779.933	784.789	802.390	821.206	827.882
25	728.342	738.053	758.690	789.037	800.569
30	671.289	679.179	711.954	745.944	762.331
35	599.061	616.663	658.543	699.208	716.203
40	531.083	551.719	589.957	636.692	653.687
45	459.462	480.706	523.192	567.500	582.674
50	393.912	410.299	461.283	498.307	515.302
55	330.182	348.997	396.946	423.652	438.826
60	270.094	285.874	330.789	356.281	373.275
65	206.971	228.214	268.273	296.799	308.938
70	152.952	175.409	208.791	228.821	239.139
75	100.147	121.997	148.096	162.663	165.698
80	57.053	72.834	80.118	62.516	64.944
85	16.995	21.243	21.850	21.850	20.029
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	319.14	N.A.	14.10
0-30	670.14	N.A.	29.50
0-40	1080.77	N.A.	47.60
0-60	1833.52	N.A.	80.80
0-80	2240.02	N.A.	98.70
0-90	2270.18	N.A.	100.00
10-90	2187.01	N.A.	96.30
20-40	761.63	N.A.	33.50
20-50	1166.1	N.A.	51.40
40-70	1013.08	N.A.	44.60
60-80	406.50	N.A.	17.90
70-80	146.17	N.A.	6.40
80-90	30.16	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	2270.18	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	83.16
10-20	235.98
20-30	351.00
30-40	410.63
40-50	404.47
50-60	348.27
60-70	260.33
70-80	146.17
80-90	30.16
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

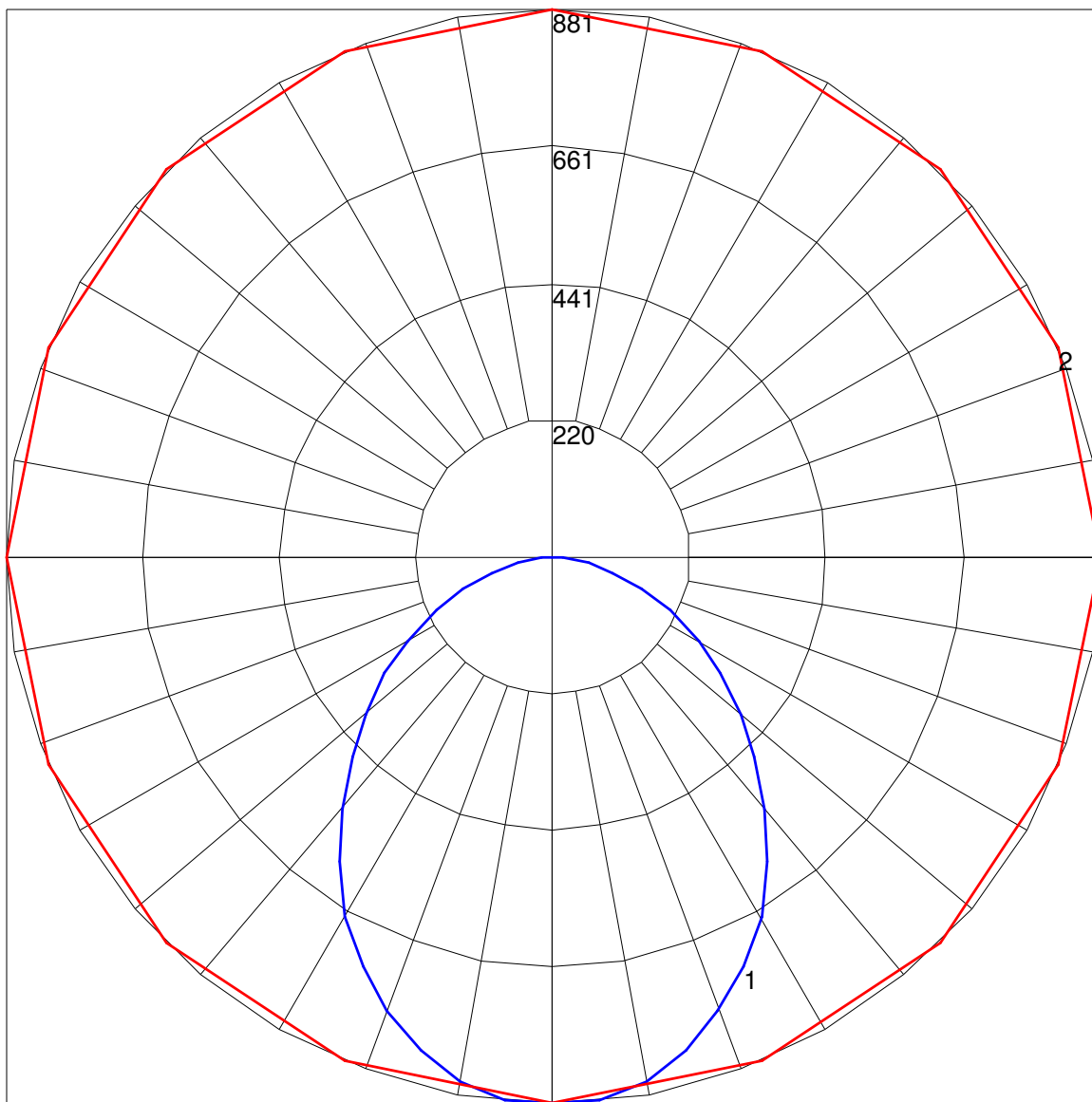
Reflectances

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	14.0	15.6	14.4	15.9	16.2	15.6	17.2	15.9	17.5	17.8
	3H	15.6	17.0	15.9	17.3	17.7	17.5	18.9	17.9	19.3	19.6
	4H	16.1	17.5	16.5	17.8	18.2	18.2	19.6	18.6	19.9	20.3
	6H	16.5	17.8	16.9	18.1	18.5	18.5	19.8	18.9	20.2	20.5
	8H	16.6	17.8	17.0	18.2	18.6	18.6	19.8	19.0	20.2	20.6
	12H	16.6	17.8	17.1	18.2	18.6	18.6	19.7	19.0	20.1	20.6
4H	2H	14.9	16.2	15.3	16.6	16.9	16.1	17.4	16.5	17.8	18.2
	3H	16.7	17.8	17.1	18.2	18.6	18.3	19.4	18.7	19.8	20.2
	4H	17.3	18.4	17.8	18.8	19.2	19.1	20.1	19.5	20.5	21.0
	6H	17.8	18.7	18.3	19.2	19.6	19.5	20.4	20.0	20.8	21.3
	8H	18.0	18.8	18.4	19.2	19.7	19.6	20.4	20.0	20.9	21.3
	12H	18.0	18.8	18.5	19.2	19.7	19.6	20.4	20.1	20.8	21.3
8H	4H	17.8	18.6	18.3	19.1	19.5	19.3	20.2	19.8	20.6	21.1
	6H	18.4	19.1	18.9	19.6	20.1	19.8	20.5	20.3	21.0	21.5
	8H	18.6	19.2	19.1	19.7	20.2	19.9	20.5	20.4	21.0	21.5
	12H	18.7	19.2	19.2	19.7	20.3	20.0	20.5	20.5	21.0	21.6
12H	4H	17.8	18.6	18.3	19.1	19.5	19.3	20.1	19.8	20.6	21.0
	6H	18.5	19.1	19.0	19.6	20.1	19.8	20.5	20.4	20.9	21.5
	8H	18.7	19.2	19.2	19.7	20.3	20.0	20.5	20.5	21.0	21.6

Maximum UGR = 21.6

POLAR GRAPH



Maximum Candela = 881.294 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.)