



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-22-L40-835-D-(L37)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 18882.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 04-16-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 2x2' RECESSED LUMINAIRE
 [MORE] WITH FROST CONCAVE ACRYLIC LENS w/DEEP ACRYLIC CENTER
 [MORE] DIFFUSER
 [LUMCAT] AT2-22-L40-835-D-(L37)-DIM-UNV
 [LAMPCAT] HLM 80 CRI, 3500K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Office, Direct
 [_SEARCH_MOUNTING] Ceiling, Recessed
 [_SEARCH_CERTIFICATION] DLC

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3767
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	110
Total Luminaire Watts	34.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.28
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	3966	4254	4550
55	3474	3750	4060
65	2958	3318	3618
75	2354	2819	3187
85	1165	1747	1529

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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	1540.545	1540.545	1540.545	1540.545	1540.545
5	1536.877	1529.541	1531.375	1529.541	1529.541
10	1500.197	1500.197	1503.865	1505.699	1507.533
15	1441.510	1447.012	1458.016	1465.352	1472.688
20	1371.819	1379.154	1397.494	1414.000	1426.838
25	1278.285	1292.957	1318.633	1338.807	1357.147
30	1170.081	1184.752	1226.934	1252.610	1267.282
35	1058.208	1067.378	1118.729	1149.907	1170.081
40	935.331	946.335	995.852	1030.698	1050.872
45	810.620	825.292	869.307	907.821	929.829
50	689.577	706.083	746.431	777.608	803.284
55	575.870	588.708	621.720	647.396	673.071
60	465.831	484.171	511.681	539.191	555.697
65	361.294	385.136	405.310	423.650	441.990
70	264.093	295.271	306.275	322.781	341.121
75	176.062	192.568	210.908	234.750	238.418
80	95.367	111.873	124.711	135.715	132.047
85	29.344	38.514	44.016	47.684	38.514
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	556.11	N.A.	14.80
0-30	1161.97	N.A.	30.80
0-40	1856.6	N.A.	49.30
0-60	3085.12	N.A.	81.90
0-80	3712.09	N.A.	98.50
0-90	3767.49	N.A.	100.00
10-90	3622.22	N.A.	96.10
20-40	1300.5	N.A.	34.50
20-50	1970.61	N.A.	52.30
40-70	1631.00	N.A.	43.30
60-80	626.97	N.A.	16.60
70-80	224.49	N.A.	6.00
80-90	55.40	N.A.	1.50
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	3767.49	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	145.27
10-20	410.84
20-30	605.86
30-40	694.63
40-50	670.12
50-60	558.40
60-70	402.48
70-80	224.49
80-90	55.40
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	101	97	107	103	99	95	98	95	92	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	87	82	77	83	79	75	80	77	74	72
3	91	81	73	67	89	80	72	67	77	71	65	74	69	64	71	67	63	61
4	84	72	64	57	82	71	63	57	69	62	56	66	60	55	64	59	55	53
5	77	65	56	50	75	64	56	50	62	55	49	60	53	48	58	52	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	42	40
7	67	53	45	39	65	53	45	39	51	44	38	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	44	39	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	27

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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

X=2H	Y=2H	16.0	17.6	16.3	17.9	18.2	16.8	18.3	17.1	18.7	19.0
	3H	17.6	19.0	18.0	19.3	19.7	18.5	19.9	18.9	20.3	20.6
	4H	18.1	19.5	18.5	19.8	20.2	19.2	20.5	19.6	20.9	21.2
	6H	18.5	19.7	18.9	20.1	20.5	19.6	20.9	20.1	21.2	21.6
	8H	18.5	19.7	19.0	20.1	20.5	19.8	20.9	20.2	21.3	21.7
	12H	18.6	19.7	19.0	20.1	20.5	19.8	20.9	20.2	21.3	21.8

UGR Viewed Endwise

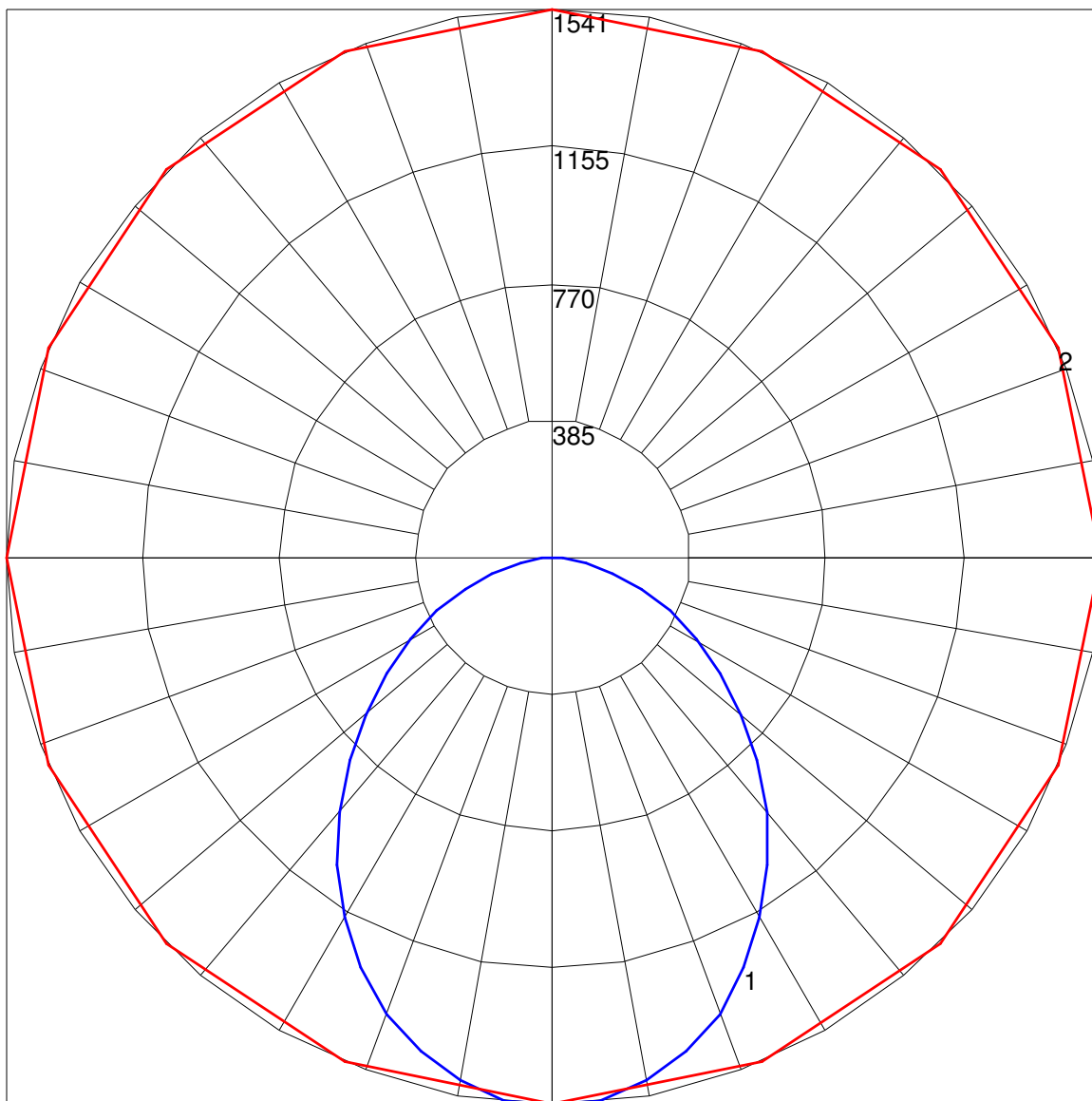
4H	2H	16.7	18.0	17.1	18.3	18.7	17.3	18.6	17.7	19.0	19.3
	3H	18.5	19.6	18.9	20.0	20.4	19.2	20.4	19.7	20.8	21.2
	4H	19.1	20.1	19.6	20.6	21.0	20.1	21.1	20.5	21.5	21.9
	6H	19.6	20.5	20.0	20.9	21.4	20.6	21.5	21.1	22.0	22.4
	8H	19.7	20.5	20.2	21.0	21.5	20.8	21.6	21.3	22.1	22.6
	12H	19.8	20.5	20.3	21.0	21.5	20.9	21.6	21.4	22.1	22.6

8H	4H	19.5	20.3	19.9	20.7	21.2	20.3	21.1	20.8	21.6	22.0
	6H	20.1	20.7	20.6	21.2	21.7	21.0	21.7	21.5	22.2	22.7
	8H	20.2	20.9	20.7	21.4	21.8	21.2	21.9	21.8	22.4	22.9
	12H	20.4	20.9	20.9	21.4	21.9	21.4	21.9	21.9	22.4	23.0

12H	4H	19.5	20.3	20.0	20.7	21.2	20.3	21.1	20.8	21.5	22.0
	6H	20.1	20.7	20.6	21.2	21.7	21.0	21.7	21.6	22.1	22.7
	8H	20.4	20.9	20.9	21.4	22.0	21.3	21.9	21.8	22.4	22.9

Maximum UGR = 23.0

POLAR GRAPH



Maximum Candela = 1540.545 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.)