



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-22-L30-840-D-(L20)-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] 05-FEB-2020
 [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-L30-840-D-(L20)-DIM-UNV
 [LAMPCAT] HLM 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2107
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
Total Luminaire Watts	20
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	2176	2368	2558
55	1913	2161	2322
65	1691	1978	2172
75	1404	1779	2056
85	755	669	635

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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	829.232	829.232	829.232	829.232	829.232
5	827.503	824.910	824.478	824.046	823.182
10	808.922	808.490	806.762	811.947	813.243
15	781.267	780.402	783.427	794.230	797.687
20	739.351	741.512	753.611	769.167	776.513
25	687.929	695.275	714.721	736.327	747.562
30	634.779	644.286	669.348	697.868	708.671
35	576.876	587.246	615.766	647.311	657.681
40	512.058	521.565	552.245	582.061	595.024
45	444.648	455.883	483.970	512.058	522.861
50	380.263	391.065	419.153	446.376	453.722
55	317.174	327.112	358.225	381.127	385.016
60	258.838	268.776	298.160	319.766	321.495
65	206.552	214.762	241.553	260.566	265.320
70	154.266	162.044	187.539	204.391	210.873
75	105.004	113.215	133.092	145.623	153.833
80	58.336	68.707	70.003	69.571	68.707
85	19.013	22.470	16.853	16.420	15.988
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	300.05	N.A.	14.20
0-30	629.90	N.A.	29.90
0-40	1014.6	N.A.	48.20
0-60	1706.76	N.A.	81.00
0-80	2078.38	N.A.	98.60
0-90	2106.84	N.A.	100.00
10-90	2028.6	N.A.	96.30
20-40	714.55	N.A.	33.90
20-50	1088.75	N.A.	51.70
40-70	928.52	N.A.	44.10
60-80	371.63	N.A.	17.60
70-80	135.25	N.A.	6.40
80-90	28.45	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	2106.84	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	78.23
10-20	221.82
20-30	329.84
30-40	384.71
40-50	374.20
50-60	317.95
60-70	236.37
70-80	135.25
80-90	28.45
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

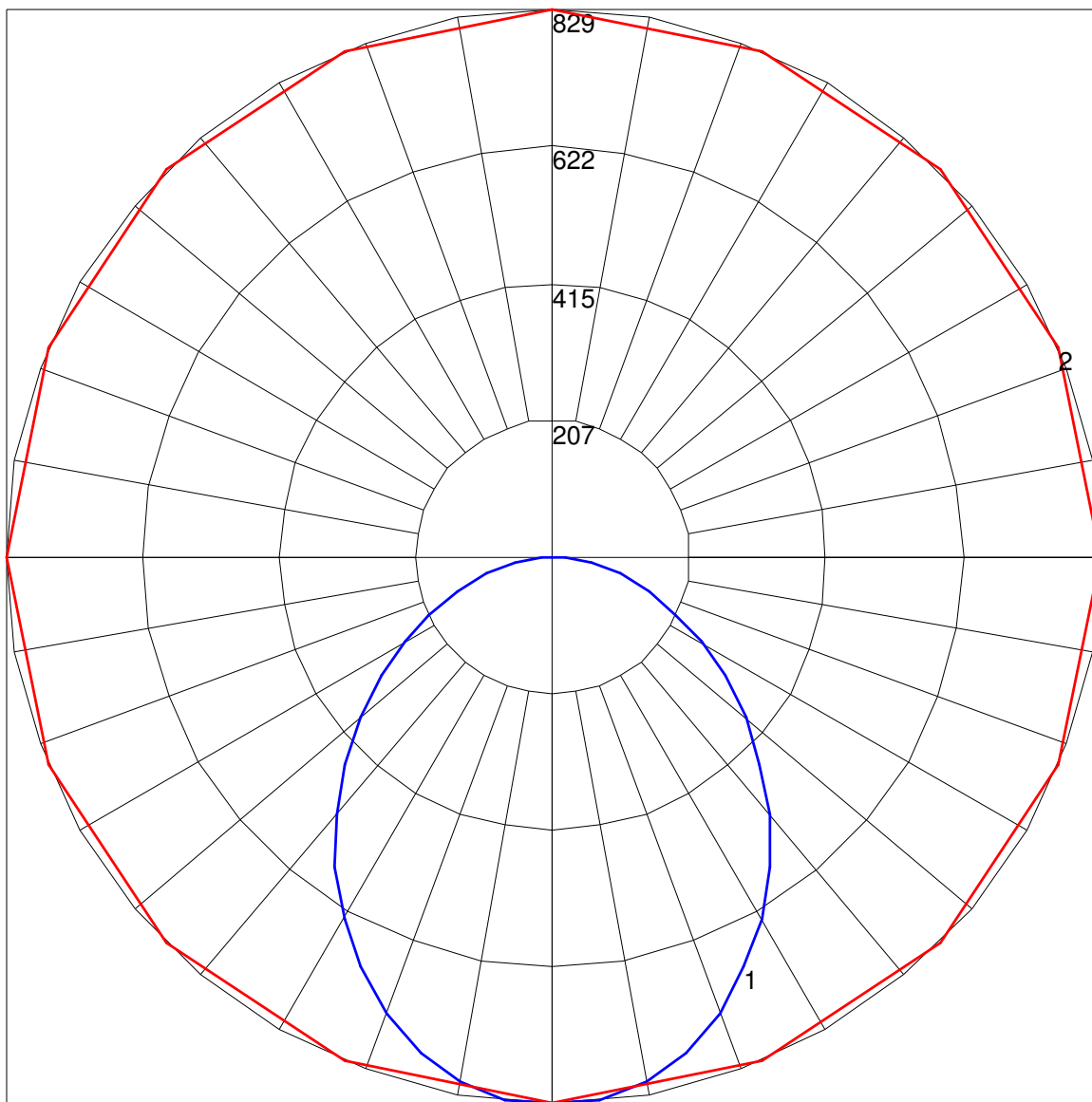
Reflectances

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	13.9	15.5	14.3	15.8	16.1	15.1	16.7	15.5	17.0	17.3
	3H	15.6	17.0	15.9	17.3	17.7	17.0	18.4	17.4	18.8	19.1
	4H	16.2	17.5	16.6	17.9	18.2	17.7	19.1	18.1	19.4	19.8
	6H	16.6	17.8	17.0	18.2	18.6	18.1	19.4	18.6	19.8	20.2
	8H	16.7	17.9	17.1	18.3	18.7	18.2	19.4	18.7	19.8	20.2
	12H	16.7	17.9	17.1	18.2	18.7	18.2	19.4	18.7	19.8	20.2
4H	2H	14.7	16.0	15.1	16.4	16.8	15.6	17.0	16.0	17.3	17.7
	3H	16.6	17.7	17.0	18.1	18.5	17.8	18.9	18.2	19.3	19.7
	4H	17.3	18.3	17.7	18.7	19.1	18.6	19.7	19.1	20.1	20.5
	6H	17.8	18.7	18.2	19.1	19.6	19.2	20.0	19.6	20.5	20.9
	8H	17.9	18.8	18.4	19.2	19.7	19.3	20.1	19.7	20.5	21.0
	12H	18.0	18.8	18.5	19.2	19.7	19.3	20.0	19.8	20.5	21.0
8H	4H	17.7	18.5	18.1	18.9	19.4	18.9	19.7	19.3	20.2	20.6
	6H	18.3	19.0	18.8	19.5	20.0	19.5	20.2	20.0	20.7	21.1
	8H	18.5	19.1	19.0	19.6	20.1	19.6	20.2	20.1	20.7	21.2
	12H	18.6	19.2	19.2	19.7	20.2	19.7	20.2	20.2	20.7	21.3
12H	4H	17.7	18.5	18.2	18.9	19.4	18.9	19.6	19.4	20.1	20.6
	6H	18.4	19.0	18.9	19.5	20.0	19.5	20.1	20.0	20.6	21.1
	8H	18.6	19.2	19.1	19.7	20.2	19.7	20.2	20.2	20.7	21.3

Maximum UGR = 21.3

POLAR GRAPH



Maximum Candela = 829.232 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.)