



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-24-L55-840-D-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19260.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 04-JUNE-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4-56LED 22"ARRAYS 2x4' RECESSED LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CONCAVE LENS

[MORE] SQUARE FLOATING CENTER SHIELD

[LUMCAT] AT3-24-L55-840-D-DIM-UNV

[LAMPCAT] HLM 80 CRI 4000K CCT

[_SEARCH_SOURCETYPE]LED

[_SEARCH_APPLICATION]INDOOR,COMMERCIAL,DIRECT,OFFICE,ARCHITECTURAL

[_SEARCH_MOUNTING]RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5461
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	48
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 ft
Luminous Width (90-270)	1.88 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2487	2780	2966
55	2120	2457	2614
65	1925	2351	2525
75	1637	2238	2238
85	1450	1034	967

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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	2175.807	2175.807	2175.807	2175.807	2175.807
5	2164.299	2165.066	2165.066	2165.834	2166.601
10	2120.568	2122.870	2128.240	2135.145	2139.748
15	2042.313	2047.683	2059.959	2078.372	2086.811
20	1924.930	1936.438	1965.592	2000.883	2015.460
25	1766.884	1781.461	1824.425	1871.992	1893.474
30	1600.400	1756.911	1659.475	1654.105	1774.556
35	1431.614	1457.699	1532.118	1605.003	1632.623
40	1269.732	1299.654	1388.650	1460.000	1483.017
45	1153.116	1189.943	1288.913	1354.125	1374.840
50	970.521	1012.717	1104.782	1158.487	1172.297
55	797.131	840.862	923.721	967.452	982.796
60	648.292	693.558	764.141	804.036	817.079
65	533.211	583.080	651.361	688.954	699.695
70	403.552	456.490	518.634	548.555	553.926
75	277.730	330.667	379.769	384.372	379.769
80	179.527	233.232	228.629	158.812	144.235
85	82.859	95.134	59.075	56.006	55.239
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	786.38	N.A.	14.40
0-30	1629.45	N.A.	29.80
0-40	2589.8	N.A.	47.40
0-60	4374.1	N.A.	80.10
0-80	5369.43	N.A.	98.30
0-90	5460.68	N.A.	100.00
10-90	5255.16	N.A.	96.20
20-40	1803.42	N.A.	33.00
20-50	2772.18	N.A.	50.80
40-70	2408.19	N.A.	44.10
60-80	995.33	N.A.	18.20
70-80	371.45	N.A.	6.80
80-90	91.25	N.A.	1.70
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	5460.68	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	205.52
10-20	580.86
20-30	843.07
30-40	960.34
40-50	968.76
50-60	815.54
60-70	623.88
70-80	371.45
80-90	91.25
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	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	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	43	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26

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UGR TABLE - CORRECTED

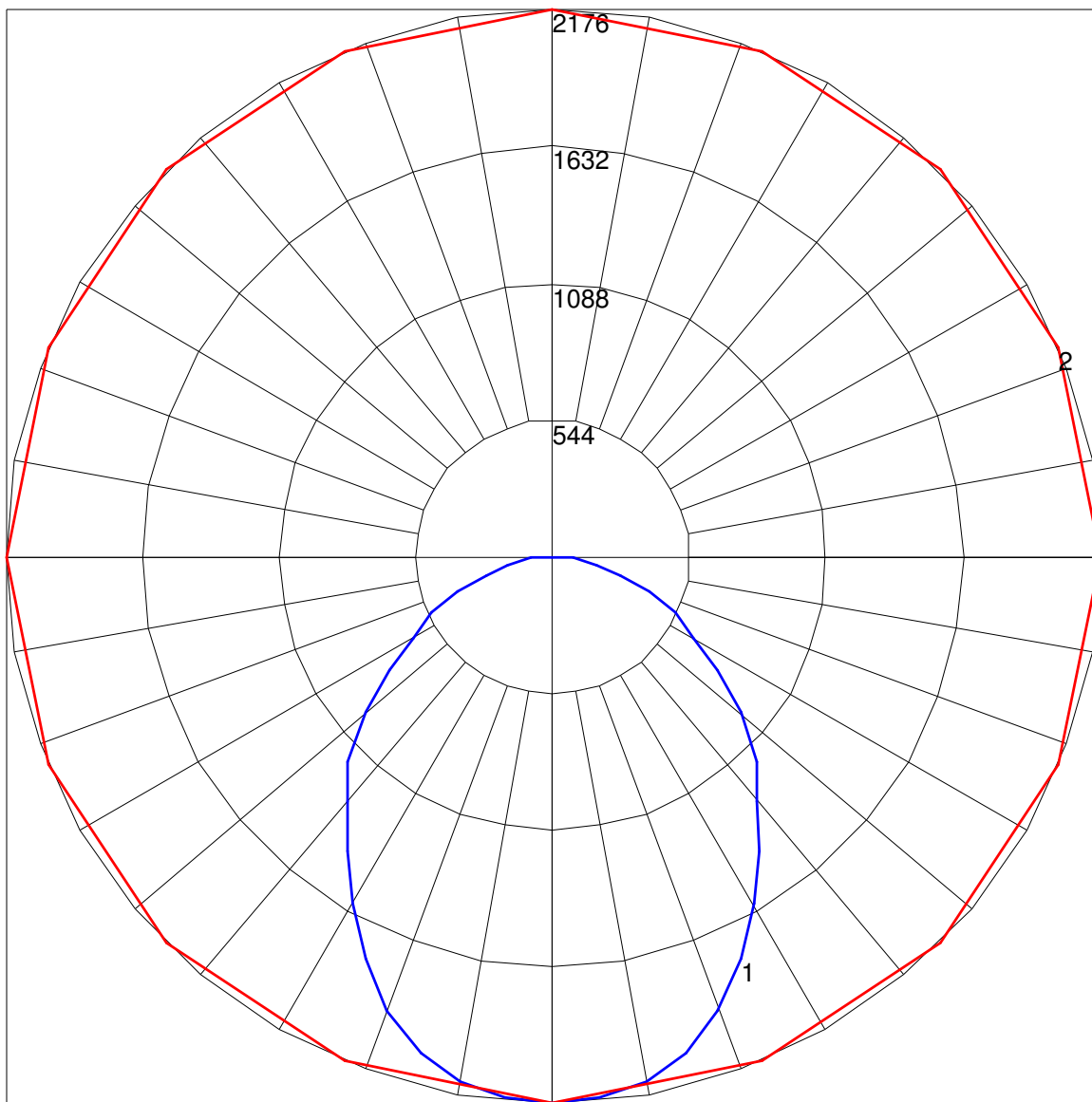
Reflectances

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	14.3	15.9	14.7	16.2	16.5	15.4	17.0	15.7	17.3	17.6
	3H	16.1	17.5	16.4	17.8	18.2	17.4	18.9	17.8	19.2	19.5
	4H	16.7	18.1	17.1	18.4	18.8	18.1	19.5	18.5	19.9	20.2
	6H	17.2	18.5	17.6	18.9	19.3	18.5	19.7	18.9	20.1	20.5
	8H	17.4	18.6	17.8	19.0	19.4	18.5	19.7	18.9	20.1	20.5
	12H	17.6	18.7	18.0	19.1	19.5	18.6	19.7	19.0	20.1	20.5
4H	2H	15.1	16.5	15.5	16.9	17.2	16.0	17.3	16.4	17.7	18.1
	3H	17.2	18.3	17.6	18.7	19.1	18.2	19.4	18.7	19.8	20.2
	4H	18.0	19.0	18.4	19.4	19.8	19.1	20.2	19.5	20.6	21.0
	6H	18.6	19.6	19.1	20.0	20.4	19.5	20.4	20.0	20.9	21.3
	8H	18.9	19.7	19.3	20.2	20.6	19.6	20.5	20.1	20.9	21.4
	12H	19.0	19.8	19.5	20.3	20.8	19.6	20.4	20.1	20.9	21.4
8H	4H	18.4	19.3	18.9	19.7	20.2	19.4	20.3	19.9	20.7	21.2
	6H	19.3	20.0	19.8	20.5	21.0	19.9	20.6	20.4	21.1	21.6
	8H	19.6	20.2	20.1	20.8	21.2	20.0	20.7	20.5	21.2	21.7
	12H	19.9	20.4	20.4	20.9	21.5	20.1	20.7	20.6	21.2	21.7
12H	4H	18.5	19.2	18.9	19.7	20.2	19.4	20.2	19.9	20.7	21.2
	6H	19.4	20.0	19.9	20.5	21.0	20.0	20.6	20.5	21.1	21.6
	8H	19.7	20.3	20.2	20.8	21.4	20.1	20.7	20.7	21.2	21.8

Maximum UGR = 21.8

POLAR GRAPH



Maximum Candela = 2175.807 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.)