



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-24-L40-835-D-(L30)-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] 21-FEB-2020
 [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
 [LUMCAT] AT3-24-L40-835-D-(L30)-DIM-UNV
 [LAMPCAT] HLM 80 CRI 3500K CCT
 [_SEARCH_SOURCETYPE]LED
 [_SEARCH_APPLICATION]INDOOR,COMMERCIAL,DIRECT,ARCHITECTURAL
 [_SEARCH_MOUNTING]RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3075
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	25
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	1401	1566	1670
55	1194	1383	1472
65	1084	1324	1422
75	922	1260	1260
85	817	582	544

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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	1225.162	1225.162	1225.162	1225.162	1225.162
5	1218.682	1219.114	1219.114	1219.546	1219.978
10	1194.057	1195.353	1198.377	1202.265	1204.858
15	1149.993	1153.017	1159.929	1170.297	1175.049
20	1083.897	1090.377	1106.793	1126.665	1134.873
25	994.904	1003.112	1027.304	1054.088	1066.184
30	901.159	989.288	934.423	931.399	999.224
35	806.118	820.806	862.711	903.751	919.303
40	714.966	731.814	781.926	822.102	835.063
45	649.301	670.037	725.766	762.486	774.150
50	546.484	570.244	622.085	652.325	660.101
55	448.852	473.476	520.132	544.756	553.396
60	365.043	390.531	430.275	452.740	460.084
65	300.242	328.323	366.771	387.939	393.987
70	227.234	257.042	292.034	308.882	311.906
75	156.385	186.193	213.842	216.434	213.842
80	101.089	131.329	128.737	89.425	81.217
85	46.656	53.568	33.264	31.536	31.104
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	442.80	N.A.	14.40
0-30	917.52	N.A.	29.80
0-40	1458.27	N.A.	47.40
0-60	2462.99	N.A.	80.10
0-80	3023.44	N.A.	98.30
0-90	3074.82	N.A.	100.00
10-90	2959.09	N.A.	96.20
20-40	1015.47	N.A.	33.00
20-50	1560.97	N.A.	50.80
40-70	1356.01	N.A.	44.10
60-80	560.45	N.A.	18.20
70-80	209.16	N.A.	6.80
80-90	51.38	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	3074.82	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	115.73
10-20	327.07
20-30	474.72
30-40	540.75
40-50	545.49
50-60	459.22
60-70	351.30
70-80	209.16
80-90	51.38
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

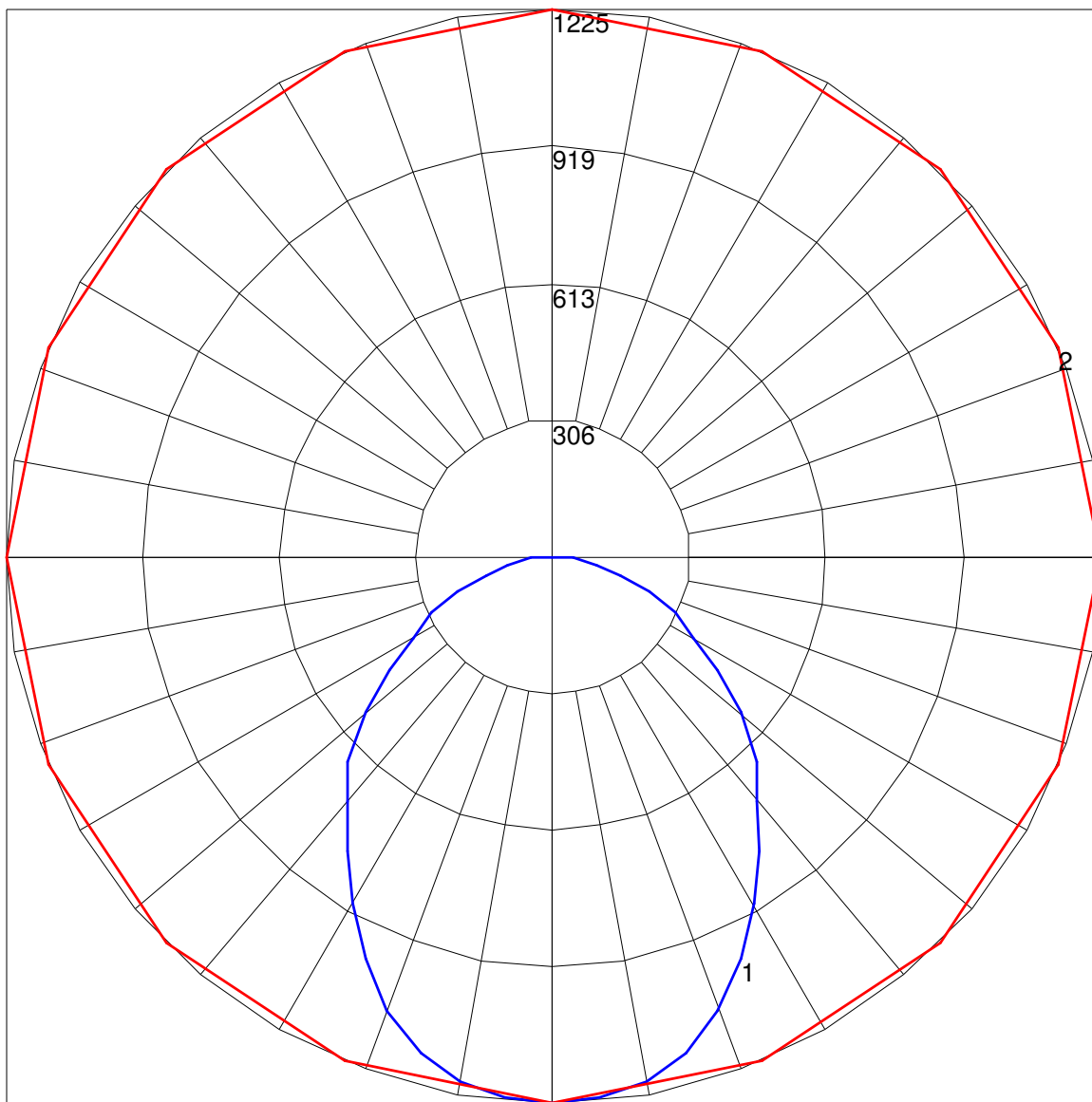
X=2H	Y=2H	12.3	13.9	12.7	14.2	14.5	13.4	15.0	13.7	15.3	15.6
	3H	14.1	15.5	14.4	15.8	16.2	15.4	16.9	15.8	17.2	17.5
	4H	14.7	16.1	15.1	16.4	16.8	16.1	17.5	16.5	17.9	18.2
	6H	15.2	16.5	15.6	16.9	17.3	16.5	17.7	16.9	18.1	18.5
	8H	15.4	16.6	15.9	17.0	17.4	16.5	17.7	16.9	18.1	18.5
	12H	15.6	16.7	16.0	17.1	17.5	16.6	17.7	17.0	18.1	18.5

UGR Viewed Endwise

4H	2H	13.1	14.5	13.5	14.9	15.2	14.0	15.3	14.4	15.7	16.1
	3H	15.2	16.3	15.6	16.7	17.1	16.2	17.4	16.7	17.8	18.2
	4H	16.0	17.0	16.4	17.4	17.8	17.1	18.2	17.6	18.6	19.0
	6H	16.6	17.6	17.1	18.0	18.4	17.5	18.4	18.0	18.9	19.3
	8H	16.9	17.7	17.3	18.2	18.6	17.6	18.5	18.1	18.9	19.4
	12H	17.0	17.8	17.5	18.3	18.8	17.7	18.4	18.1	18.9	19.4
8H	4H	16.4	17.3	16.9	17.7	18.2	17.4	18.3	17.9	18.7	19.2
	6H	17.3	18.0	17.8	18.5	19.0	17.9	18.6	18.4	19.1	19.6
	8H	17.6	18.2	18.1	18.8	19.2	18.0	18.7	18.5	19.2	19.7
	12H	17.9	18.4	18.4	18.9	19.5	18.1	18.7	18.6	19.2	19.7
12H	4H	16.5	17.2	16.9	17.7	18.2	17.5	18.2	17.9	18.7	19.2
	6H	17.4	18.0	17.9	18.5	19.0	18.0	18.6	18.5	19.1	19.6
	8H	17.7	18.3	18.2	18.8	19.4	18.1	18.7	18.7	19.2	19.8

Maximum UGR = 19.8

POLAR GRAPH



Maximum Candela = 1225.162 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.)