



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-24-L40-835-D-EM12W-DIM-UNV_(EMER MODE).IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 18876.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 05-21-2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 2x4 'RECESSED LUMINAIRE

[MORE]WITH FROSTCONCAVE ACRYLIC LENS w/SHALLOW ACRYLIC CENTER

[MORE] DIFFUSER

[LUMCAT] AT1-24-L40-835-D-EM12W-DIM-UNV(EMER MODE)

[LAMPCAT] HLM 80 CRI, 3500K CCT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Educational, Office, Direct

[_SEARCH_MOUNTING] Ceiling, Recessed

[_SEARCH_CERTIFICATION] DLC

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1416
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	12
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 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	647	756	820
55	561	687	740
65	499	654	706
75	426	633	650
85	359	384	393

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	544.792	544.792	544.792	544.792	544.792
5	545.252	544.792	546.171	546.171	546.631
10	530.540	531.000	534.218	536.977	538.356
15	512.151	514.909	520.886	527.322	531.000
20	479.969	486.865	496.979	509.392	514.909
25	441.810	448.247	464.797	482.727	490.543
30	404.112	412.847	435.834	458.821	467.556
35	371.010	381.584	409.169	434.455	443.649
40	322.278	334.691	365.494	390.320	397.216
45	282.281	295.613	330.094	351.242	358.138
50	239.065	254.236	285.499	303.888	308.945
55	198.608	214.239	243.203	257.914	262.052
60	163.208	178.839	205.044	217.457	221.135
65	130.107	147.117	170.564	181.138	184.356
70	98.384	116.314	136.543	144.358	145.738
75	68.042	86.431	101.143	104.821	103.901
80	42.756	59.307	64.823	49.652	45.055
85	19.309	27.125	20.688	20.688	21.148
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	198.24	N.A.	14.00
0-30	413.32	N.A.	29.20
0-40	666.18	N.A.	47.00
0-60	1128.01	N.A.	79.70
0-80	1389.03	N.A.	98.10
0-90	1415.92	N.A.	100.00
10-90	1364.25	N.A.	96.40
20-40	467.95	N.A.	33.00
20-50	717.11	N.A.	50.60
40-70	624.32	N.A.	44.10
60-80	261.03	N.A.	18.40
70-80	98.53	N.A.	7.00
80-90	26.89	N.A.	1.90
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	1415.92	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	51.67
10-20	146.57
20-30	215.08
30-40	252.87
40-50	249.16
50-60	212.66
60-70	162.50
70-80	98.53
80-90	26.89
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	94	98	94	91	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	44
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	42	37	48	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25

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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

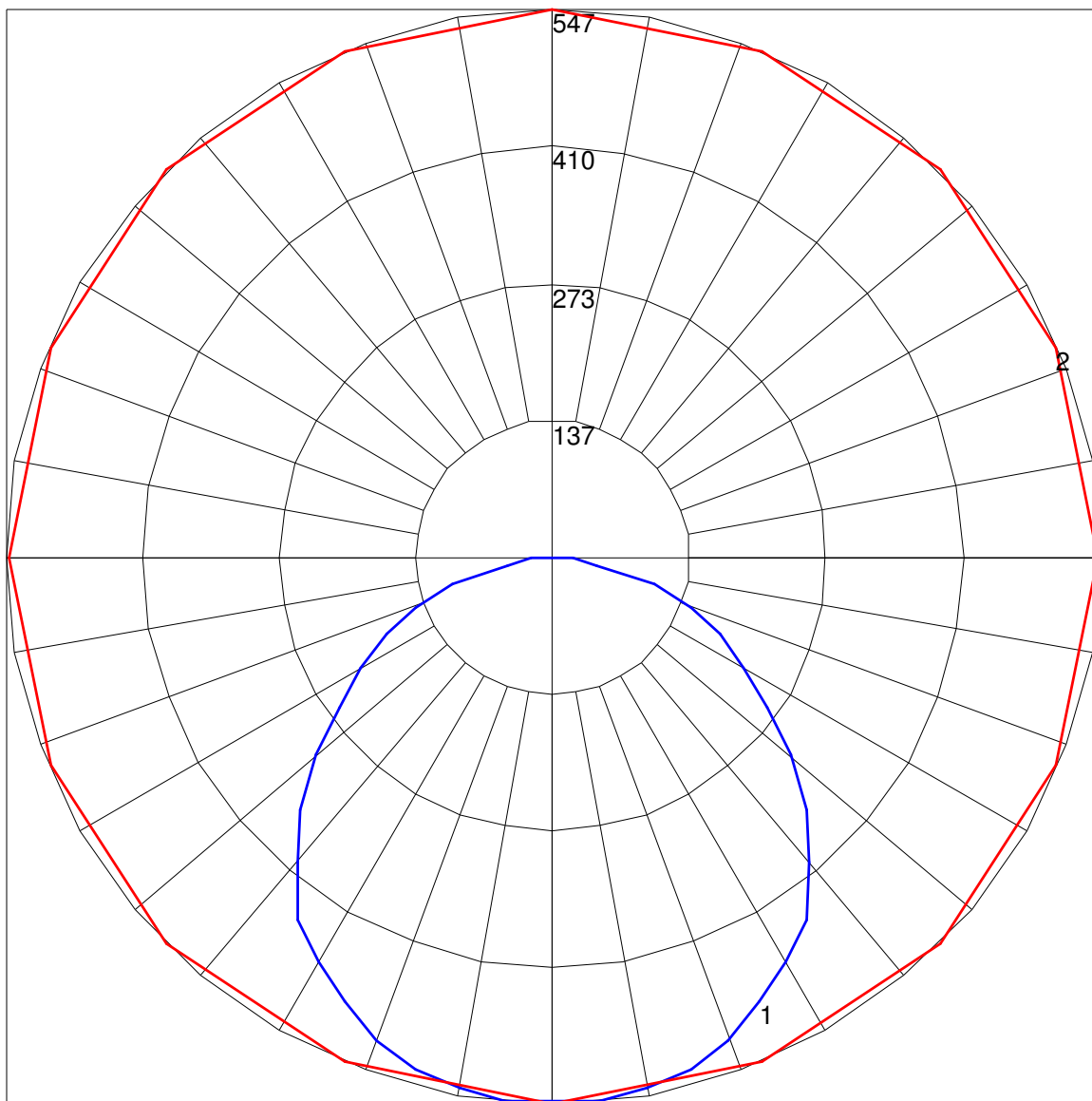
X=2H	Y=2H	9.7	11.3	10.0	11.6	11.9	11.1	12.7	11.5	13.0	13.4
	3H	11.4	12.8	11.8	13.2	13.5	13.1	14.5	13.5	14.9	15.2
	4H	12.0	13.4	12.4	13.7	14.1	13.8	15.2	14.2	15.6	15.9
	6H	12.5	13.8	12.9	14.2	14.6	14.2	15.5	14.7	15.9	16.3
	8H	12.7	13.9	13.1	14.3	14.7	14.3	15.5	14.8	15.9	16.3
	12H	12.8	14.0	13.2	14.4	14.8	14.4	15.6	14.8	15.9	16.4

UGR Viewed Endwise

4H	2H	10.6	12.0	11.0	12.3	12.7	11.7	13.1	12.1	13.4	13.8
	3H	12.6	13.7	13.0	14.1	14.5	13.9	15.1	14.3	15.5	15.9
	4H	13.4	14.4	13.8	14.8	15.2	14.8	15.9	15.3	16.3	16.7
	6H	14.0	14.9	14.5	15.4	15.8	15.3	16.2	15.8	16.7	17.1
	8H	14.2	15.1	14.7	15.5	16.0	15.5	16.3	15.9	16.7	17.2
	12H	14.4	15.2	14.9	15.6	16.1	15.5	16.3	16.0	16.8	17.3
8H	4H	13.9	14.7	14.3	15.2	15.6	15.1	16.0	15.6	16.4	16.9
	6H	14.7	15.4	15.2	15.9	16.4	15.8	16.5	16.2	16.9	17.4
	8H	15.0	15.7	15.5	16.2	16.7	15.9	16.6	16.4	17.1	17.6
	12H	15.3	15.9	15.8	16.3	16.9	16.1	16.7	16.6	17.1	17.7
12H	4H	13.9	14.7	14.4	15.2	15.6	15.2	15.9	15.6	16.4	16.9
	6H	14.8	15.5	15.3	15.9	16.5	15.8	16.5	16.3	16.9	17.5
	8H	15.2	15.8	15.7	16.3	16.8	16.1	16.6	16.6	17.1	17.7

Maximum UGR = 17.7

POLAR GRAPH



Maximum Candela = 546.631 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)