



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-24-L40-840-D-EM10W-DIM-UNV_(EMER MODE).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] 08-21-2023

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4 RECESSED LED LUMINAIRE

[MORE] FROSTED ACRYLIC CONCAVE LENS IN DOOR

[MORE] SECONDARY CENTER SHIELDING MEDIA

[LUMCAT] AT3-24-L40-840-D-EM10W-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	1170
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	10
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	533	596	635
55	454	526	560
65	412	504	541
75	351	480	480
85	311	222	207

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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	466.159	466.159	466.159	466.159	466.159
5	463.693	463.858	463.858	464.022	464.187
10	454.324	454.817	455.968	457.447	458.433
15	437.558	438.709	441.339	445.284	447.092
20	412.409	414.875	421.121	428.682	431.805
25	378.549	381.672	390.877	401.068	405.670
30	342.880	376.412	355.537	354.386	380.192
35	306.718	312.307	328.251	343.866	349.784
40	272.036	278.446	297.513	312.800	317.731
45	247.051	254.941	276.145	290.117	294.555
50	207.931	216.971	236.696	248.202	251.160
55	170.783	180.152	197.904	207.273	210.561
60	138.894	148.592	163.715	172.262	175.056
65	114.239	124.923	139.552	147.606	149.907
70	86.460	97.801	111.115	117.526	118.677
75	59.503	70.844	81.364	82.350	81.364
80	38.463	49.969	48.983	34.025	30.902
85	17.752	20.382	12.657	11.999	11.835
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	168.48	N.A.	14.40
0-30	349.10	N.A.	29.80
0-40	554.85	N.A.	47.40
0-60	937.14	N.A.	80.10
0-80	1150.38	N.A.	98.30
0-90	1169.93	N.A.	100.00
10-90	1125.9	N.A.	96.20
20-40	386.38	N.A.	33.00
20-50	593.93	N.A.	50.80
40-70	515.95	N.A.	44.10
60-80	213.25	N.A.	18.20
70-80	79.58	N.A.	6.80
80-90	19.55	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	1169.93	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	44.03
10-20	124.45
20-30	180.63
30-40	205.75
40-50	207.55
50-60	174.73
60-70	133.66
70-80	79.58
80-90	19.55
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	8.9	10.5	9.2	10.8	11.1	10.0	11.6	10.3	11.9	12.2
	3H	10.7	12.1	11.0	12.4	12.8	12.0	13.5	12.4	13.8	14.1
	4H	11.3	12.7	11.7	13.0	13.4	12.7	14.1	13.1	14.5	14.8
	6H	11.8	13.1	12.2	13.5	13.9	13.1	14.3	13.5	14.7	15.1
	8H	12.0	13.2	12.4	13.6	14.0	13.1	14.3	13.5	14.7	15.1
	12H	12.2	13.3	12.6	13.7	14.1	13.2	14.3	13.6	14.7	15.1

UGR Viewed Endwise

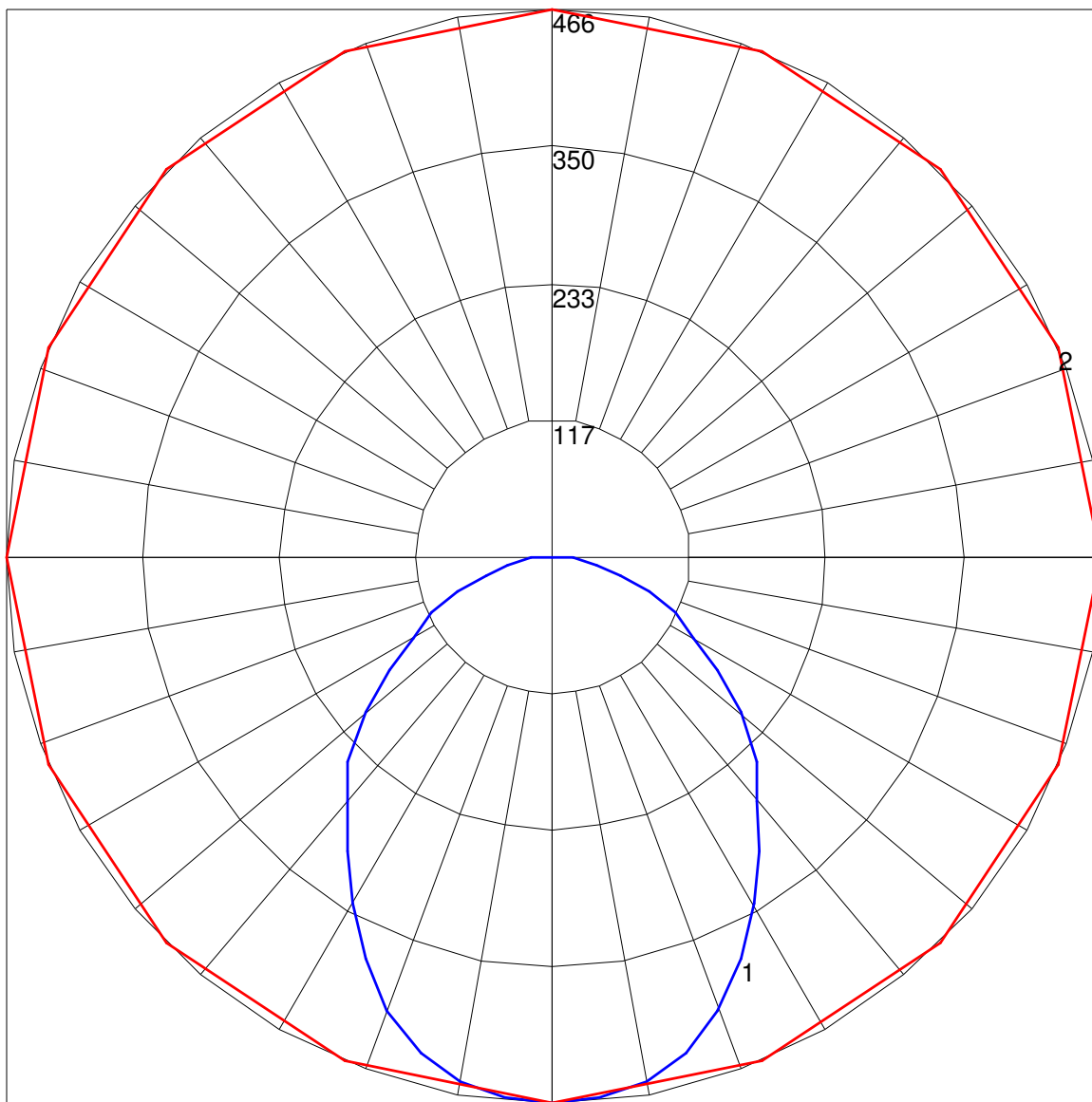
4H	2H	9.7	11.1	10.1	11.5	11.8	10.6	11.9	11.0	12.3	12.7
	3H	11.8	12.9	12.2	13.3	13.7	12.8	14.0	13.3	14.4	14.8
	4H	12.6	13.6	13.0	14.0	14.4	13.7	14.8	14.1	15.2	15.6
	6H	13.2	14.1	13.7	14.6	15.0	14.1	15.0	14.6	15.5	15.9
	8H	13.5	14.3	13.9	14.8	15.2	14.2	15.1	14.7	15.5	16.0
	12H	13.6	14.4	14.1	14.9	15.4	14.2	15.0	14.7	15.5	16.0
8H	4H	13.0	13.9	13.5	14.3	14.8	14.0	14.9	14.5	15.3	15.8
	6H	13.9	14.6	14.4	15.1	15.6	14.5	15.2	15.0	15.7	16.2
	8H	14.2	14.8	14.7	15.3	15.8	14.6	15.3	15.1	15.8	16.3
	12H	14.5	15.0	15.0	15.5	16.1	14.7	15.3	15.2	15.8	16.3
12H	4H	13.1	13.8	13.5	14.3	14.8	14.0	14.8	14.5	15.3	15.8
	6H	14.0	14.6	14.5	15.1	15.6	14.6	15.2	15.1	15.7	16.2
	8H	14.3	14.9	14.8	15.4	15.9	14.7	15.3	15.3	15.8	16.4

Maximum UGR = 16.4

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POLAR GRAPH



Maximum Candela = 466.159 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.)