

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L40-835-HIAFR-(L30)-EM10W-DIM-UNV (EMER MODE).IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19227.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 08-31-2023

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4' ENCLOSED & GASKETED LED LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC LENS

[LUMCAT] 96-4-L40-835-HIAFR-(L30)-EM10W-DIM-UNV (EMER MODE)

[LAMPCAT] HLM 80 CRI 3500K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1381
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	138
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.23 ft
Luminous Width (90-270)	0.50 ft
Luminous Height	0.18 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2081	1641	1598
55	1771	1396	1379
65	1298	1134	1224
75	796	956	1056
85	293	751	901

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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	487.890	487.890	487.890	487.890	487.890
5	492.168	485.864	482.712	480.460	479.785
10	485.639	477.759	472.805	471.004	469.203
15	473.481	464.475	457.045	452.767	450.291
20	455.919	446.688	435.656	426.651	426.425
25	435.206	425.300	409.089	397.607	394.004
30	409.089	396.481	374.642	371.265	371.715
35	376.893	364.060	343.347	353.478	358.882
40	340.195	328.487	318.356	329.613	334.116
45	301.470	290.438	292.014	294.490	300.794
50	258.017	247.435	256.891	261.169	265.221
55	211.637	206.233	220.417	228.973	234.151
60	164.356	169.985	183.268	198.353	205.783
65	117.526	134.187	150.847	172.687	178.991
70	80.377	98.614	124.731	147.470	151.298
75	46.830	68.669	99.514	120.678	124.731
80	22.064	45.705	74.523	94.786	98.614
85	7.430	29.044	54.035	73.848	77.900
90	3.152	17.561	39.400	55.386	59.438
95	2.477	12.158	31.520	43.678	47.506
100	2.251	7.430	25.892	36.474	38.500
105	1.801	4.503	19.588	29.269	31.295
110	1.126	1.351	13.734	22.740	24.991
115	0.675	0.675	9.006	16.886	19.588
120	0.000	0.000	4.503	12.158	14.634
125	0.000	0.000	1.351	7.430	9.681
130	0.000	0.000	0.000	3.827	5.403
135	0.000	0.000	0.000	0.901	2.026
140	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 96-4-L40-835-HIAFR-(L30)-EM10W-DIM-UNV (EMER MODE)\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	175.19	N.A.	12.70
0-30	364.84	N.A.	26.40
0-40	588.25	N.A.	42.60
0-60	1011.92	N.A.	73.30
0-80	1262.44	N.A.	91.40
0-90	1318.2	N.A.	95.40
10-90	1272.3	N.A.	92.10
20-40	413.07	N.A.	29.90
20-50	639.80	N.A.	46.30
40-70	574.43	N.A.	41.60
60-80	250.53	N.A.	18.10
70-80	99.76	N.A.	7.20
80-90	55.76	N.A.	4.00
90-110	49.88	N.A.	3.60
90-120	59.11	N.A.	4.30
90-130	62.38	N.A.	4.50
90-150	62.90	N.A.	4.60
90-180	62.90	N.A.	4.60
110-180	13.01	N.A.	0.90
0-180	1381.1	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	45.90
10-20	129.28
20-30	189.65
30-40	223.41
40-50	226.74
50-60	196.92
60-70	150.77
70-80	99.76
80-90	55.76
90-100	31.28
100-110	18.60
110-120	9.23
120-130	3.27
130-140	0.52
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	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	95
1	107	102	97	93	104	99	95	91	94	90	87	89	86	84	85	83	81	78
2	97	89	82	76	94	86	80	74	82	77	72	78	73	70	74	71	67	65
3	89	78	69	63	86	76	68	62	72	66	60	69	63	59	66	61	57	55
4	81	69	60	53	78	67	59	53	64	57	51	61	55	50	59	53	49	47
5	75	62	53	46	72	60	52	46	58	50	45	55	49	44	53	47	43	41
6	69	56	47	40	67	54	46	40	52	45	39	50	43	38	48	42	38	36
7	64	50	42	36	62	49	41	35	47	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	32	44	36	31	42	35	31	40	35	30	28
9	56	42	34	29	54	42	34	28	40	33	28	39	32	28	37	32	27	25
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	35	29	25	23

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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	11.8	13.3	12.2	13.7	14.2	13.5	15.0	13.9	15.4	15.9
	3H	12.9	14.3	13.4	14.7	15.2	15.8	17.1	16.2	17.6	18.1
	4H	13.2	14.5	13.7	15.0	15.5	16.8	18.1	17.3	18.6	19.0
	6H	13.3	14.5	13.8	15.0	15.5	17.8	19.0	18.3	19.5	20.0
	8H	13.3	14.5	13.8	15.0	15.5	18.3	19.4	18.8	19.9	20.4
	12H	13.3	14.4	13.8	14.9	15.5	18.8	19.9	19.3	20.4	20.9

### UGR Viewed Endwise

4H	2H	12.5	13.8	13.0	14.2	14.7	13.9	15.2	14.3	15.6	16.1
	3H	13.9	15.0	14.4	15.5	16.0	16.4	17.5	16.9	18.0	18.5
	4H	14.3	15.3	14.8	15.8	16.4	17.6	18.6	18.1	19.1	19.6
	6H	14.5	15.4	15.1	16.0	16.5	18.8	19.6	19.3	20.2	20.7
	8H	14.6	15.4	15.1	16.0	16.5	19.3	20.2	19.9	20.7	21.3
	12H	14.6	15.4	15.2	15.9	16.5	20.0	20.7	20.5	21.3	21.9

8H	4H	14.9	15.7	15.4	16.3	16.9	17.8	18.6	18.3	19.1	19.7
	6H	15.3	16.0	15.9	16.6	17.2	19.1	19.8	19.7	20.4	21.0
	8H	15.4	16.1	16.0	16.6	17.2	19.8	20.4	20.4	21.0	21.6
	12H	15.5	16.1	16.1	16.6	17.3	20.6	21.2	21.2	21.7	22.4

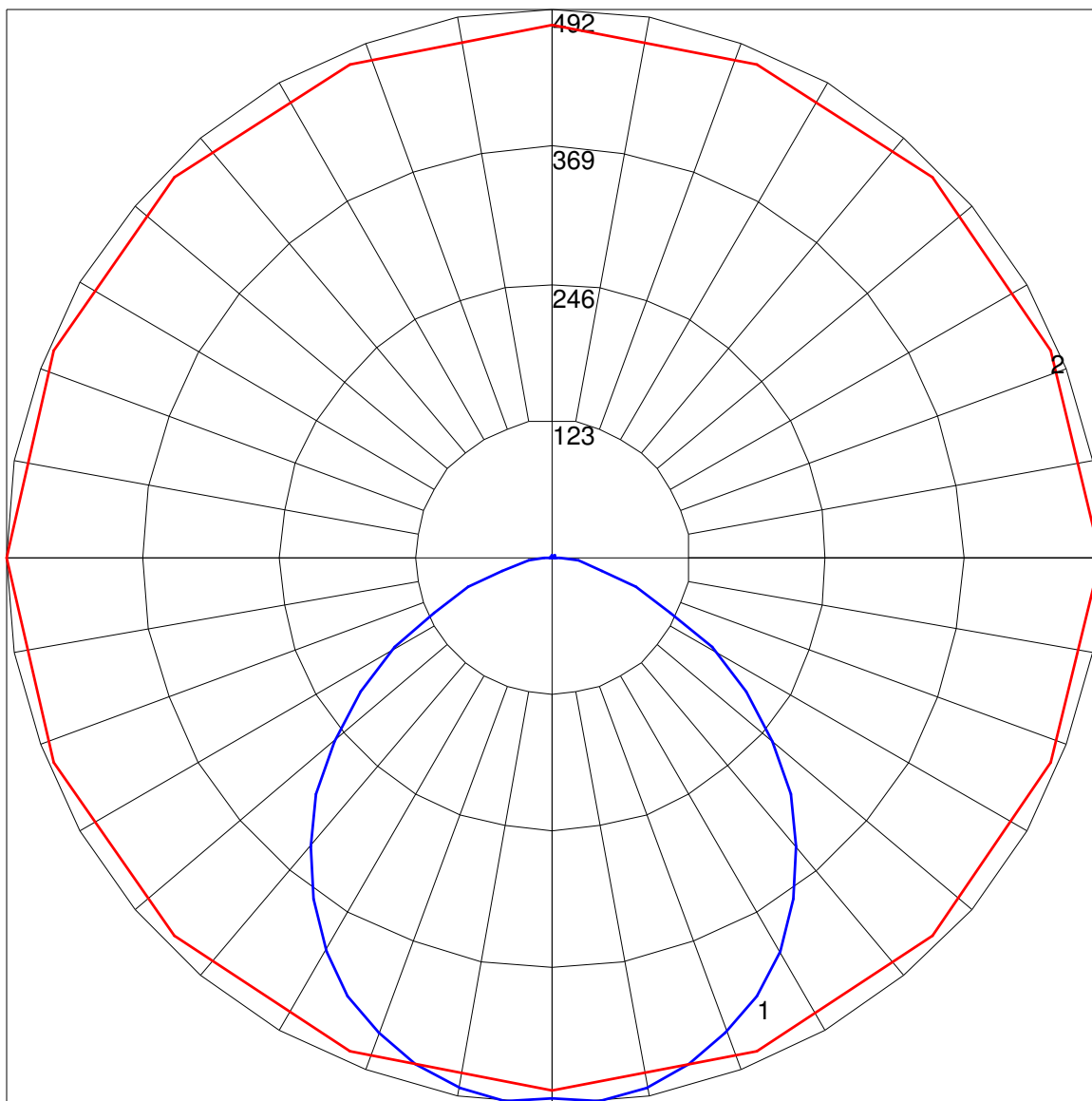
12H	4H	15.1	15.8	15.6	16.4	17.0	17.8	18.5	18.3	19.1	19.7
	6H	15.6	16.2	16.1	16.7	17.4	19.1	19.8	19.7	20.3	21.0
	8H	15.8	16.3	16.3	16.9	17.5	19.9	20.4	20.5	21.0	21.7

Maximum UGR = 22.4

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## POLAR GRAPH



Maximum Candela = 492.168 Located At Horizontal Angle = 0, Vertical Angle = 5

# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)