



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L40-840-AF-EM-10W-(L25)-DIM-UNV_EM MODE ONLY.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20802.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 03-AUG-2023
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
 [LUMINAIRE] WHITE REFLECTOR w/FROSTED CENTER LENS
 [LUMINAIRE] 0-10V DIMMING DRIVER
 [LUMCAT] LT-24-L40-840-AF-EM-10W-(L25)-DIM-UNV EM MODE ONLY
 [LAMPCAT] HLMX 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1453
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	145
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.93 ft
Luminous Width (90-270)	1.91 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	600	667	718
55	546	647	724
65	466	643	758
75	344	676	848
85	132	542	499

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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	504.739	504.739	504.739	504.739	504.739
5	509.578	503.529	500.384	499.174	499.174
10	500.142	493.851	492.157	492.399	491.673
15	485.140	480.784	480.059	481.752	482.720
20	465.541	461.669	463.363	467.960	468.928
25	439.892	436.505	442.554	449.087	450.539
30	410.373	409.647	417.874	426.584	429.972
35	375.772	378.675	390.773	401.904	406.017
40	339.235	344.558	363.189	376.014	380.853
45	295.439	304.634	328.346	349.639	353.269
50	258.903	270.275	293.504	314.313	320.362
55	218.010	229.383	258.419	280.679	288.906
60	177.844	190.426	221.398	248.256	255.999
65	137.194	154.616	189.217	215.349	222.850
70	99.206	118.805	154.616	182.442	188.491
75	61.943	85.898	121.708	146.631	152.680
80	29.762	55.652	88.317	99.932	96.544
85	7.985	27.584	32.907	29.278	30.246
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	183.51	N.A.	12.60
0-30	387.86	N.A.	26.70
0-40	632.40	N.A.	43.50
0-60	1113.5	N.A.	76.60
0-80	1417.25	N.A.	97.50
0-90	1452.95	N.A.	100.00
10-90	1405.31	N.A.	96.70
20-40	448.88	N.A.	30.90
20-50	701.23	N.A.	48.30
40-70	664.09	N.A.	45.70
60-80	303.74	N.A.	20.90
70-80	120.76	N.A.	8.30
80-90	35.71	N.A.	2.50
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	1452.95	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	47.64
10-20	135.87
20-30	204.35
30-40	244.53
40-50	252.34
50-60	228.76
60-70	182.98
70-80	120.76
80-90	35.71
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	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	82	77	95	88	81	76	84	79	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	53	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

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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	9.6	11.3	10.0	11.6	11.9	11.3	13.0	11.7	13.3	13.6
	3H	11.2	12.7	11.6	13.0	13.4	13.7	15.2	14.1	15.5	15.9
	4H	11.7	13.1	12.1	13.5	13.9	14.7	16.2	15.1	16.5	16.9
	6H	12.0	13.4	12.4	13.7	14.1	15.6	16.9	16.0	17.3	17.6
	8H	12.1	13.4	12.5	13.8	14.2	15.8	17.1	16.2	17.5	17.9
	12H	12.1	13.3	12.6	13.7	14.2	15.9	17.2	16.4	17.5	18.0

UGR Viewed Endwise

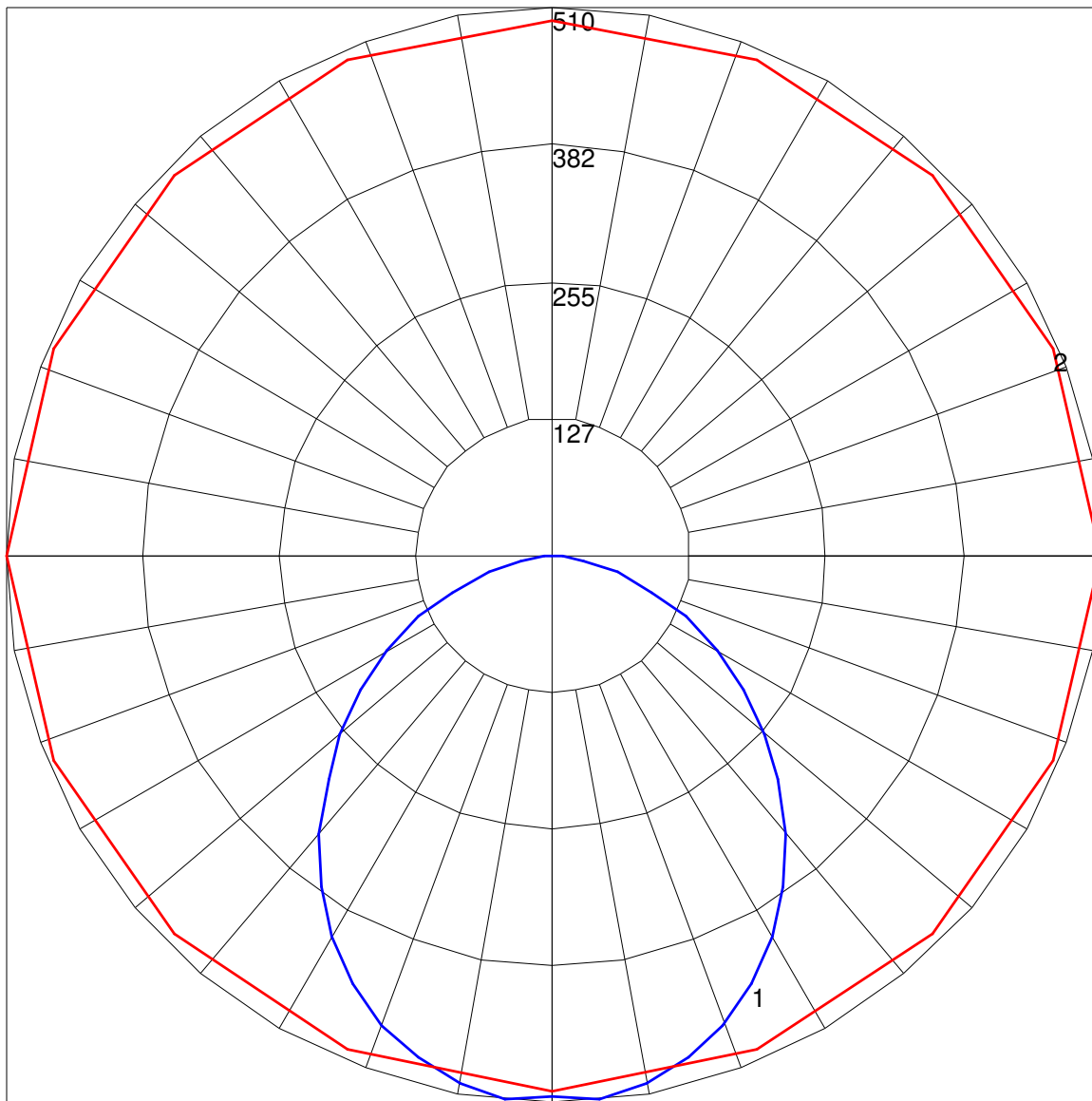
4H	2H	10.6	12.0	11.0	12.3	12.7	11.9	13.3	12.3	13.7	14.0
	3H	12.4	13.6	12.8	14.0	14.4	14.5	15.7	14.9	16.1	16.5
	4H	13.1	14.2	13.5	14.6	15.0	15.8	16.9	16.2	17.3	17.7
	6H	13.6	14.5	14.0	15.0	15.4	16.8	17.8	17.3	18.2	18.6
	8H	13.7	14.6	14.2	15.0	15.5	17.1	18.0	17.6	18.4	18.9
	12H	13.8	14.6	14.2	15.0	15.5	17.3	18.1	17.7	18.5	19.0
8H	4H	13.9	14.8	14.3	15.2	15.7	16.1	17.0	16.6	17.4	17.9
	6H	14.5	15.3	15.0	15.8	16.2	17.3	18.0	17.8	18.5	19.0
	8H	14.8	15.4	15.3	15.9	16.4	17.7	18.4	18.2	18.9	19.4
	12H	14.9	15.5	15.4	16.0	16.5	17.9	18.5	18.4	19.0	19.6
12H	4H	14.0	14.8	14.5	15.3	15.8	16.1	16.9	16.6	17.4	17.9
	6H	14.8	15.5	15.3	15.9	16.5	17.4	18.0	17.9	18.5	19.0
	8H	15.1	15.7	15.6	16.2	16.7	17.8	18.4	18.3	18.9	19.5

Maximum UGR = 19.6

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POLAR GRAPH



Maximum Candela = 509.578 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.)