



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L40-840-AF-EM-10W-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
 [ISSUEDATE] 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-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	1278
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
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	528	587	631
55	480	569	637
65	410	566	666
75	302	594	745
85	116	477	439

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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	443.948	443.948	443.948	443.948	443.948
5	448.204	442.884	440.117	439.053	439.053
10	439.904	434.371	432.881	433.094	432.456
15	426.709	422.879	422.240	423.730	424.581
20	409.471	406.066	407.555	411.599	412.450
25	386.911	383.932	389.253	394.999	396.276
30	360.947	360.309	367.545	375.206	378.186
35	330.513	333.067	343.709	353.498	357.116
40	298.377	303.059	319.447	330.726	334.983
45	259.856	267.944	288.800	307.529	310.721
50	227.720	237.723	258.154	276.457	281.777
55	191.753	201.756	227.295	246.874	254.110
60	156.425	167.491	194.733	218.356	225.166
65	120.670	135.994	166.427	189.412	196.010
70	87.257	104.496	135.994	160.468	165.789
75	54.483	75.552	107.050	128.970	134.291
80	26.177	48.949	77.680	87.896	84.916
85	7.023	24.262	28.944	25.752	26.603
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	161.41	N.A.	12.60
0-30	341.15	N.A.	26.70
0-40	556.23	N.A.	43.50
0-60	979.39	N.A.	76.60
0-80	1246.55	N.A.	97.50
0-90	1277.96	N.A.	100.00
10-90	1236.05	N.A.	96.70
20-40	394.82	N.A.	30.90
20-50	616.77	N.A.	48.30
40-70	584.10	N.A.	45.70
60-80	267.16	N.A.	20.90
70-80	106.22	N.A.	8.30
80-90	31.41	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	1277.96	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	41.91
10-20	119.51
20-30	179.74
30-40	215.08
40-50	221.95
50-60	201.21
60-70	160.94
70-80	106.22
80-90	31.41
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	9.2	10.9	9.6	11.2	11.5	10.9	12.6	11.3	12.9	13.2
	3H	10.8	12.3	11.2	12.6	13.0	13.3	14.8	13.7	15.1	15.5
	4H	11.3	12.7	11.7	13.1	13.5	14.3	15.8	14.7	16.1	16.5
	6H	11.6	13.0	12.0	13.3	13.7	15.2	16.5	15.6	16.9	17.2
	8H	11.7	13.0	12.1	13.4	13.8	15.4	16.7	15.8	17.1	17.5
	12H	11.7	12.9	12.2	13.3	13.8	15.5	16.8	16.0	17.1	17.6

UGR Viewed Endwise

4H	2H	10.2	11.6	10.6	11.9	12.3	11.5	12.9	11.9	13.3	13.6
	3H	12.0	13.2	12.4	13.6	14.0	14.1	15.3	14.5	15.7	16.1
	4H	12.7	13.8	13.1	14.2	14.6	15.4	16.5	15.8	16.9	17.3
	6H	13.2	14.1	13.6	14.6	15.0	16.4	17.4	16.9	17.8	18.2
	8H	13.3	14.2	13.8	14.6	15.1	16.7	17.6	17.2	18.0	18.5
	12H	13.4	14.2	13.8	14.6	15.1	16.9	17.7	17.3	18.1	18.6

8H	4H	13.5	14.4	13.9	14.8	15.3	15.7	16.6	16.2	17.0	17.5
	6H	14.1	14.9	14.6	15.4	15.8	16.9	17.6	17.4	18.1	18.6
	8H	14.4	15.0	14.9	15.5	16.0	17.3	18.0	17.8	18.5	19.0
	12H	14.5	15.1	15.0	15.6	16.1	17.5	18.1	18.0	18.6	19.2

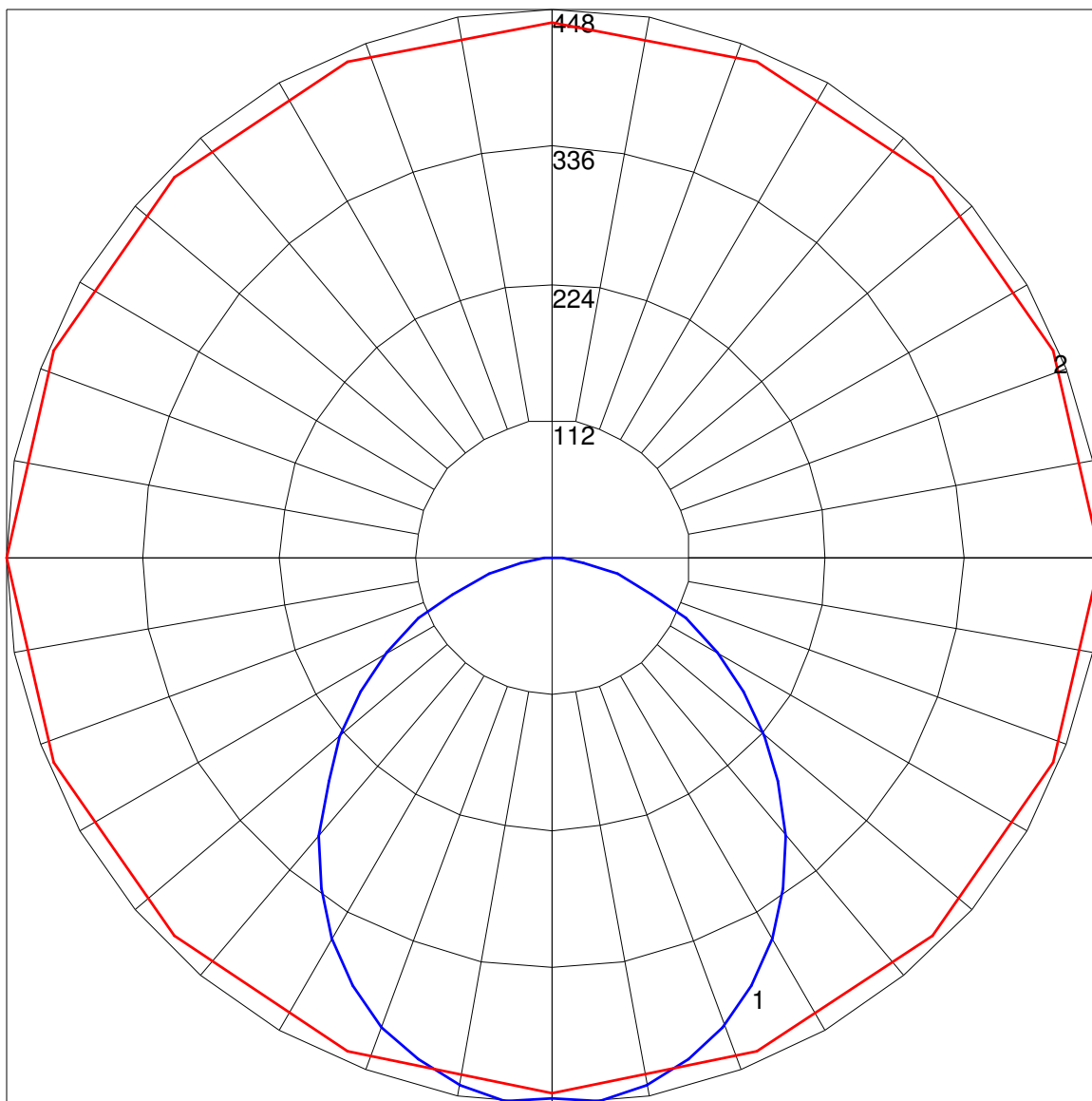
12H	4H	13.6	14.4	14.1	14.9	15.4	15.7	16.5	16.2	17.0	17.5
	6H	14.4	15.1	14.9	15.5	16.1	17.0	17.6	17.5	18.1	18.6
	8H	14.7	15.3	15.2	15.8	16.3	17.4	18.0	17.9	18.5	19.1

Maximum UGR = 19.2

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POLAR GRAPH



Maximum Candela = 448.204 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.)