



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L82-840-AF-(L72)-DIM-UNV_.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] 2023-07-24
 [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-L82-840-AF-DIM-UNV
 [LAMPCAT] 22 INCH LED ARRAYS
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Classroom, Office, Direct
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7547
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
Total Luminaire Watts	55.5
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	3118	3465	3728
55	2836	3362	3759
65	2423	3341	3935
75	1786	3509	4402
85	684	2818	2590

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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	2621.656	2621.656	2621.656	2621.656	2621.656
5	2646.791	2615.372	2599.033	2592.749	2592.749
10	2597.777	2565.100	2556.303	2557.559	2553.789
15	2519.856	2497.234	2493.463	2502.261	2507.288
20	2418.056	2397.948	2406.745	2430.624	2435.651
25	2284.837	2267.242	2298.662	2332.595	2340.136
30	2131.509	2127.739	2170.469	2215.714	2233.309
35	1951.789	1966.870	2029.709	2087.522	2108.887
40	1762.014	1789.663	1886.436	1953.045	1978.181
45	1534.536	1582.294	1705.459	1816.056	1834.908
50	1344.761	1403.830	1524.481	1632.565	1663.985
55	1132.364	1191.433	1342.247	1457.872	1500.602
60	923.738	989.091	1149.959	1289.462	1329.680
65	712.598	803.086	982.807	1118.540	1157.500
70	515.282	617.082	803.086	947.617	979.036
75	321.737	446.159	632.163	761.612	793.032
80	154.585	289.061	458.727	519.053	501.458
85	41.474	143.274	170.923	152.071	157.098
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	953.18	N.A.	12.60
0-30	2014.59	N.A.	26.70
0-40	3284.72	N.A.	43.50
0-60	5783.62	N.A.	76.60
0-80	7361.29	N.A.	97.50
0-90	7546.76	N.A.	100.00
10-90	7299.3	N.A.	96.70
20-40	2331.54	N.A.	30.90
20-50	3642.24	N.A.	48.30
40-70	3449.31	N.A.	45.70
60-80	1577.67	N.A.	20.90
70-80	627.25	N.A.	8.30
80-90	185.47	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	7546.76	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	247.47
10-20	705.72
20-30	1061.41
30-40	1270.13
40-50	1310.7
50-60	1188.2
60-70	950.42
70-80	627.25
80-90	185.47
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	15.3	17.0	15.7	17.3	17.6	17.0	18.7	17.4	19.0	19.3
	3H	16.9	18.4	17.3	18.7	19.1	19.4	20.9	19.8	21.2	21.6
	4H	17.4	18.8	17.8	19.2	19.6	20.4	21.9	20.8	22.2	22.6
	6H	17.7	19.1	18.1	19.4	19.8	21.3	22.6	21.7	23.0	23.4
	8H	17.8	19.1	18.2	19.5	19.9	21.5	22.8	21.9	23.2	23.6
	12H	17.8	19.1	18.3	19.4	19.9	21.6	22.9	22.1	23.2	23.7

UGR Viewed Endwise

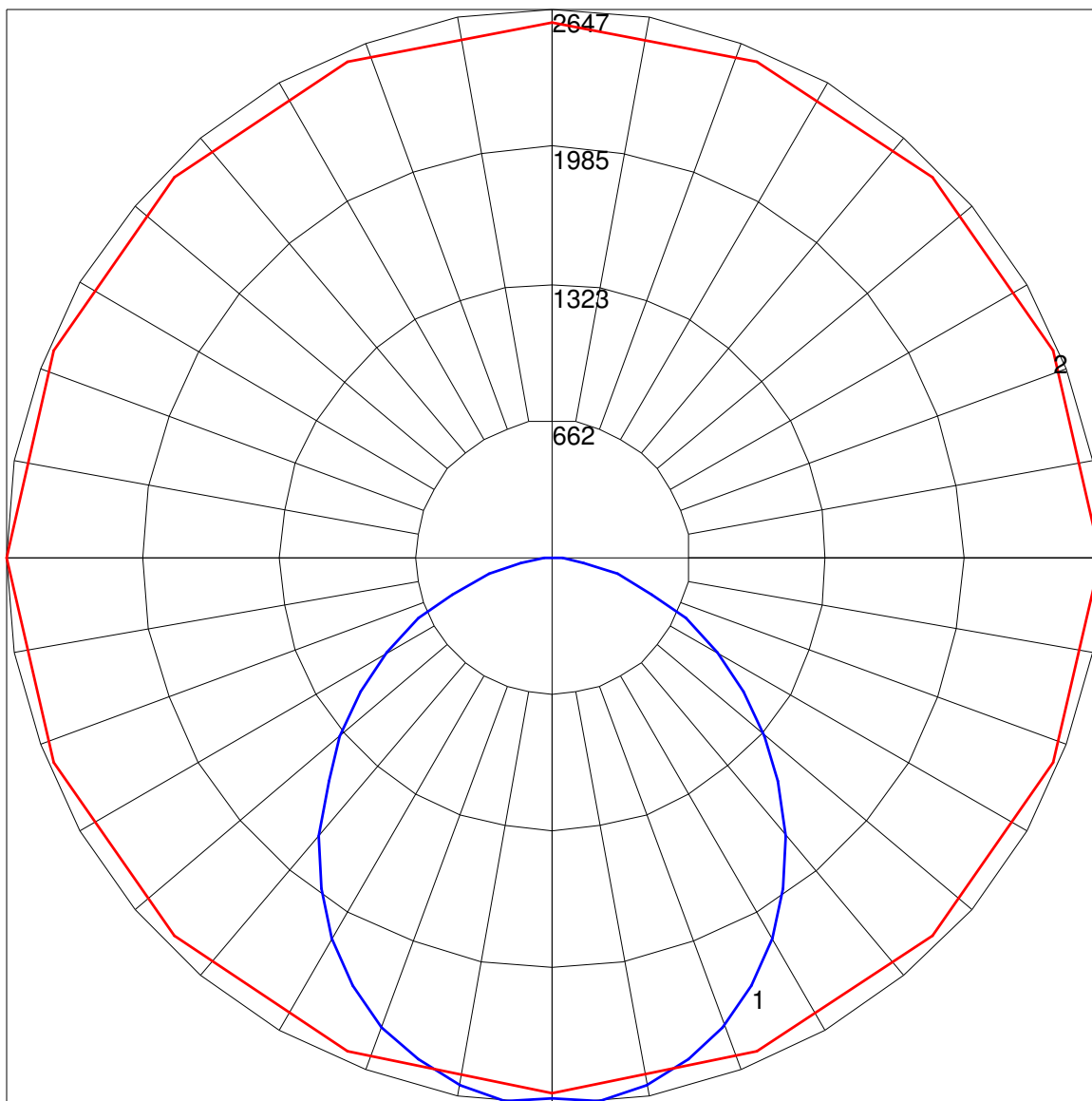
4H	2H	16.3	17.7	16.7	18.0	18.4	17.6	19.0	18.0	19.4	19.7
	3H	18.1	19.3	18.5	19.7	20.1	20.2	21.4	20.6	21.8	22.2
	4H	18.8	19.9	19.2	20.3	20.8	21.5	22.6	21.9	23.0	23.4
	6H	19.3	20.2	19.7	20.7	21.1	22.5	23.5	23.0	23.9	24.3
	8H	19.4	20.3	19.9	20.7	21.2	22.8	23.7	23.3	24.1	24.6
	12H	19.5	20.3	19.9	20.7	21.2	23.0	23.8	23.4	24.2	24.7

8H	4H	19.6	20.5	20.0	20.9	21.4	21.8	22.7	22.3	23.1	23.6
	6H	20.2	21.0	20.7	21.5	21.9	23.0	23.7	23.5	24.2	24.7
	8H	20.5	21.1	21.0	21.6	22.1	23.4	24.1	23.9	24.6	25.1
	12H	20.6	21.2	21.1	21.7	22.2	23.6	24.2	24.1	24.7	25.3

12H	4H	19.7	20.5	20.2	21.0	21.5	21.8	22.6	22.3	23.1	23.6
	6H	20.5	21.2	21.0	21.6	22.2	23.1	23.7	23.6	24.2	24.7
	8H	20.8	21.4	21.3	21.9	22.4	23.5	24.1	24.0	24.6	25.2

Maximum UGR = 25.3

POLAR GRAPH



Maximum Candela = 2646.791 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.)