



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L52-840-AF-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-L52-840-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	5358
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	144
Total Luminaire Watts	37.2
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	2214	2460	2647
55	2014	2387	2669
65	1720	2372	2794
75	1268	2491	3125
85	485	2000	1839

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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	1861.268	1861.268	1861.268	1861.268	1861.268
5	1879.113	1856.807	1845.207	1840.746	1840.746
10	1844.315	1821.116	1814.870	1815.762	1813.086
15	1788.994	1772.934	1770.257	1776.503	1780.072
20	1716.721	1702.445	1708.690	1725.643	1729.213
25	1622.141	1609.649	1631.955	1656.047	1661.400
30	1513.284	1510.607	1540.944	1573.066	1585.558
35	1385.690	1396.397	1441.010	1482.055	1497.223
40	1250.958	1270.588	1339.292	1386.582	1404.427
45	1089.457	1123.364	1210.806	1289.325	1302.709
50	954.725	996.662	1082.319	1159.054	1181.361
55	803.932	845.869	952.941	1035.029	1065.366
60	655.816	702.214	816.424	915.465	944.018
65	505.915	570.158	697.752	794.117	821.777
70	365.829	438.103	570.158	672.769	695.076
75	228.420	316.755	448.810	540.714	563.020
80	109.749	205.221	325.677	368.506	356.014
85	29.445	101.718	121.348	107.964	111.533
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	676.72	N.A.	12.60
0-30	1430.28	N.A.	26.70
0-40	2332.02	N.A.	43.50
0-60	4106.13	N.A.	76.60
0-80	5226.21	N.A.	97.50
0-90	5357.89	N.A.	100.00
10-90	5182.2	N.A.	96.70
20-40	1655.3	N.A.	30.90
20-50	2585.84	N.A.	48.30
40-70	2448.87	N.A.	45.70
60-80	1120.08	N.A.	20.90
70-80	445.32	N.A.	8.30
80-90	131.68	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	5357.89	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	175.69
10-20	501.03
20-30	753.56
30-40	901.74
40-50	930.54
50-60	843.57
60-70	674.76
70-80	445.32
80-90	131.68
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	14.1	15.8	14.5	16.1	16.4	15.8	17.5	16.2	17.8	18.1
	3H	15.7	17.2	16.1	17.5	17.9	18.2	19.7	18.6	20.0	20.4
	4H	16.2	17.6	16.6	18.0	18.4	19.2	20.7	19.6	21.0	21.4
	6H	16.5	17.9	16.9	18.2	18.6	20.1	21.4	20.5	21.8	22.2
	8H	16.6	17.9	17.0	18.3	18.7	20.3	21.6	20.7	22.0	22.4
	12H	16.6	17.9	17.1	18.2	18.7	20.4	21.7	20.9	22.0	22.5

UGR Viewed Endwise

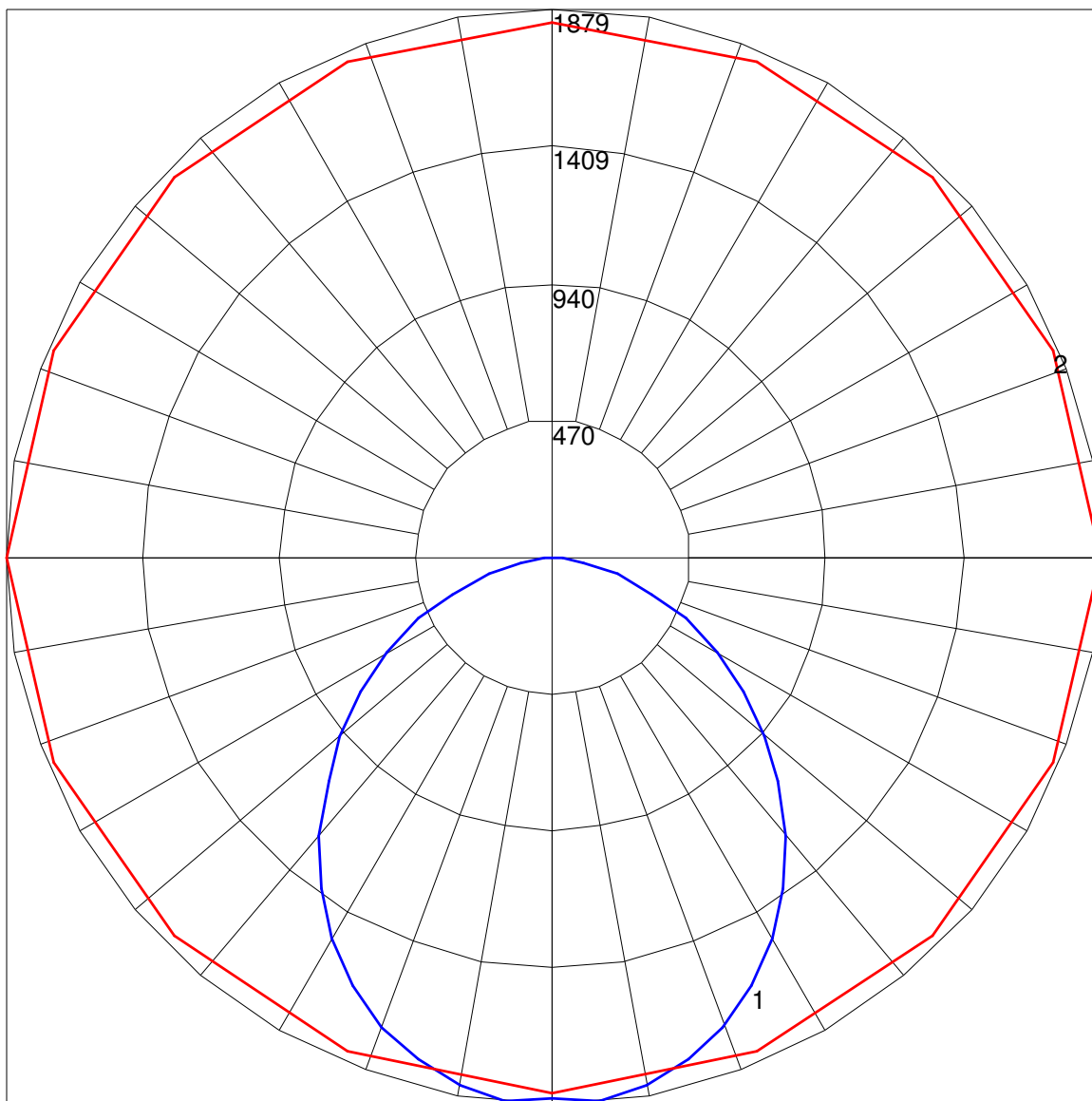
4H	2H	15.1	16.5	15.5	16.8	17.2	16.4	17.8	16.8	18.2	18.5
	3H	16.9	18.1	17.3	18.5	18.9	19.0	20.2	19.4	20.6	21.0
	4H	17.6	18.7	18.0	19.1	19.6	20.3	21.4	20.7	21.8	22.2
	6H	18.1	19.0	18.5	19.5	19.9	21.3	22.3	21.8	22.7	23.1
	8H	18.2	19.1	18.7	19.5	20.0	21.6	22.5	22.1	22.9	23.4
	12H	18.3	19.1	18.7	19.5	20.0	21.8	22.6	22.2	23.0	23.5

8H	4H	18.4	19.3	18.8	19.7	20.2	20.6	21.5	21.1	21.9	22.4
	6H	19.0	19.8	19.5	20.3	20.7	21.8	22.5	22.3	23.0	23.5
	8H	19.3	19.9	19.8	20.4	20.9	22.2	22.9	22.7	23.4	23.9
	12H	19.4	20.0	19.9	20.5	21.0	22.4	23.0	22.9	23.5	24.1

12H	4H	18.5	19.3	19.0	19.8	20.3	20.6	21.4	21.1	21.9	22.4
	6H	19.3	20.0	19.8	20.4	21.0	21.9	22.5	22.4	23.0	23.5
	8H	19.6	20.2	20.1	20.7	21.2	22.3	22.9	22.8	23.4	24.0

Maximum UGR = 24.1

POLAR GRAPH



Maximum Candela = 1879.113 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.)