



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L110-850-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-L110-850-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	11729
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	143
Total Luminaire Watts	81.8
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	4846	5385	5794
55	4408	5225	5842
65	3765	5193	6116
75	2776	5454	6842
85	1063	4379	4025

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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	4074.352	4074.352	4074.352	4074.352	4074.352
5	4113.416	4064.586	4039.195	4029.429	4029.429
10	4037.242	3986.459	3972.786	3974.740	3968.880
15	3916.144	3880.987	3875.127	3888.799	3896.612
20	3757.936	3726.685	3740.357	3777.468	3785.280
25	3550.898	3523.553	3572.383	3625.119	3636.838
30	3312.609	3306.749	3373.157	3443.472	3470.817
35	3033.303	3056.741	3154.400	3244.247	3277.451
40	2738.371	2781.341	2931.737	3035.256	3074.320
45	2384.844	2459.065	2650.477	2822.358	2851.656
50	2089.912	2181.712	2369.218	2537.193	2586.022
55	1759.823	1851.623	2086.006	2265.699	2332.108
60	1435.594	1537.160	1787.168	2003.972	2066.474
65	1107.458	1248.088	1527.394	1738.338	1798.887
70	800.807	959.016	1248.088	1472.705	1521.534
75	500.016	693.382	982.454	1183.633	1232.462
80	240.242	449.233	712.914	806.667	779.322
85	64.455	222.664	265.634	236.336	244.149
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1481.35	N.A.	12.60
0-30	3130.9	N.A.	26.70
0-40	5104.83	N.A.	43.50
0-60	8988.4	N.A.	76.60
0-80	11440.29	N.A.	97.50
0-90	11728.53	N.A.	100.00
10-90	11343.94	N.A.	96.70
20-40	3623.48	N.A.	30.90
20-50	5660.45	N.A.	48.30
40-70	5360.63	N.A.	45.70
60-80	2451.88	N.A.	20.90
70-80	974.82	N.A.	8.30
80-90	288.25	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	11728.53	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	384.59
10-20	1096.76
20-30	1649.55
30-40	1973.93
40-50	2036.97
50-60	1846.6
60-70	1477.06
70-80	974.82
80-90	288.25
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

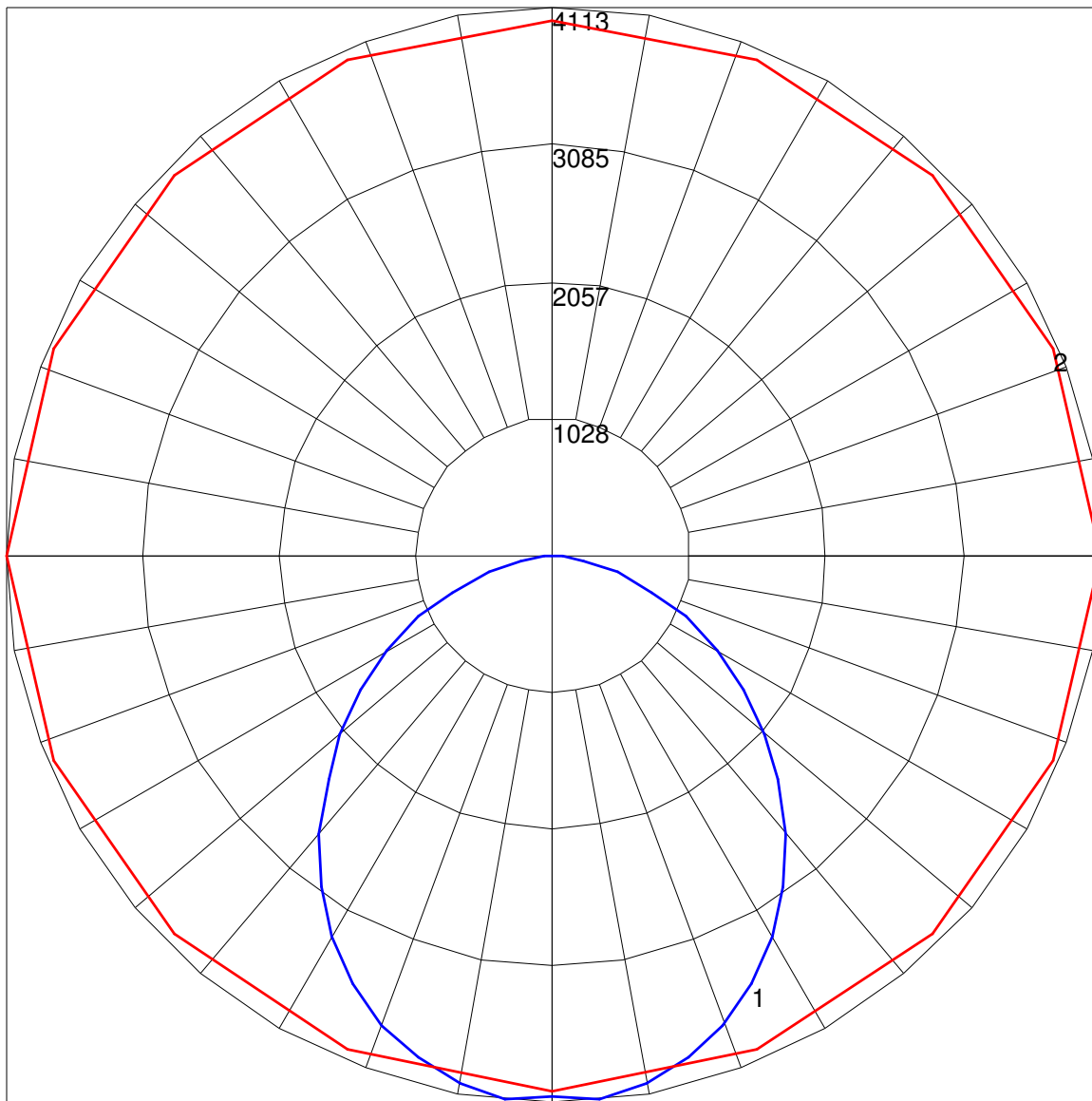
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	16.9	18.6	17.3	18.9	19.2	18.6	20.3	19.0	20.6	20.9
	3H	18.5	20.0	18.9	20.3	20.7	21.0	22.5	21.4	22.8	23.2
	4H	19.0	20.4	19.4	20.8	21.2	22.0	23.5	22.4	23.8	24.2
	6H	19.3	20.7	19.7	21.0	21.4	22.9	24.2	23.3	24.6	25.0
	8H	19.4	20.7	19.8	21.1	21.5	23.1	24.4	23.5	24.8	25.2
	12H	19.4	20.7	19.9	21.0	21.5	23.2	24.5	23.7	24.8	25.3
4H	2H	17.9	19.3	18.3	19.6	20.0	19.2	20.6	19.6	21.0	21.3
	3H	19.7	20.9	20.1	21.3	21.7	21.8	23.0	22.2	23.4	23.8
	4H	20.4	21.5	20.8	21.9	22.4	23.1	24.2	23.5	24.6	25.0
	6H	20.9	21.8	21.3	22.3	22.7	24.1	25.1	24.6	25.5	25.9
	8H	21.0	21.9	21.5	22.3	22.8	24.4	25.3	24.9	25.7	26.2
	12H	21.1	21.9	21.5	22.3	22.8	24.6	25.4	25.0	25.8	26.3
8H	4H	21.2	22.1	21.6	22.5	23.0	23.4	24.3	23.9	24.7	25.2
	6H	21.8	22.6	22.3	23.1	23.5	24.6	25.3	25.1	25.8	26.3
	8H	22.1	22.7	22.6	23.2	23.7	25.0	25.7	25.5	26.2	26.7
	12H	22.2	22.8	22.7	23.3	23.8	25.2	25.8	25.7	26.3	26.9
12H	4H	21.3	22.1	21.8	22.6	23.1	23.4	24.2	23.9	24.7	25.2
	6H	22.1	22.8	22.6	23.2	23.8	24.7	25.3	25.2	25.8	26.3
	8H	22.4	23.0	22.9	23.5	24.0	25.1	25.7	25.6	26.2	26.8

Maximum UGR = 26.9

POLAR GRAPH



Maximum Candela = 4113.416 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.)