



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L110-830-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-L110-830-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	10954
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	134
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	4526	5030	5412
55	4117	4880	5456
65	3516	4850	5712
75	2592	5094	6390
85	992	4090	3759

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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	3805.292	3805.292	3805.292	3805.292	3805.292
5	3841.776	3796.171	3772.456	3763.335	3763.335
10	3770.632	3723.202	3710.433	3712.257	3706.785
15	3657.531	3624.695	3619.223	3631.992	3639.289
20	3509.770	3480.583	3493.353	3528.013	3535.309
25	3316.405	3290.866	3336.471	3385.725	3396.670
30	3093.852	3088.379	3150.402	3216.073	3241.612
35	2832.990	2854.881	2946.091	3030.005	3061.016
40	2557.535	2597.668	2738.132	2834.815	2871.299
45	2227.354	2296.674	2475.446	2635.976	2663.339
50	1951.899	2037.637	2212.761	2369.642	2415.247
55	1643.609	1729.346	1948.251	2116.078	2178.101
60	1340.791	1435.649	1669.148	1871.634	1930.009
65	1034.324	1165.667	1426.528	1623.542	1680.093
70	747.924	895.685	1165.667	1375.451	1421.056
75	466.996	647.593	917.575	1105.468	1151.073
80	224.377	419.567	665.835	753.397	727.858
85	60.199	207.959	248.092	220.729	228.026
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1383.53	N.A.	12.60
0-30	2924.14	N.A.	26.70
0-40	4767.72	N.A.	43.50
0-60	8394.83	N.A.	76.60
0-80	10684.8	N.A.	97.50
0-90	10954.01	N.A.	100.00
10-90	10594.81	N.A.	96.70
20-40	3384.19	N.A.	30.90
20-50	5286.65	N.A.	48.30
40-70	5006.63	N.A.	45.70
60-80	2289.97	N.A.	20.90
70-80	910.45	N.A.	8.30
80-90	269.21	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	10954.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	359.19
10-20	1024.34
20-30	1540.62
30-40	1843.58
40-50	1902.46
50-60	1724.65
60-70	1379.52
70-80	910.45
80-90	269.21
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

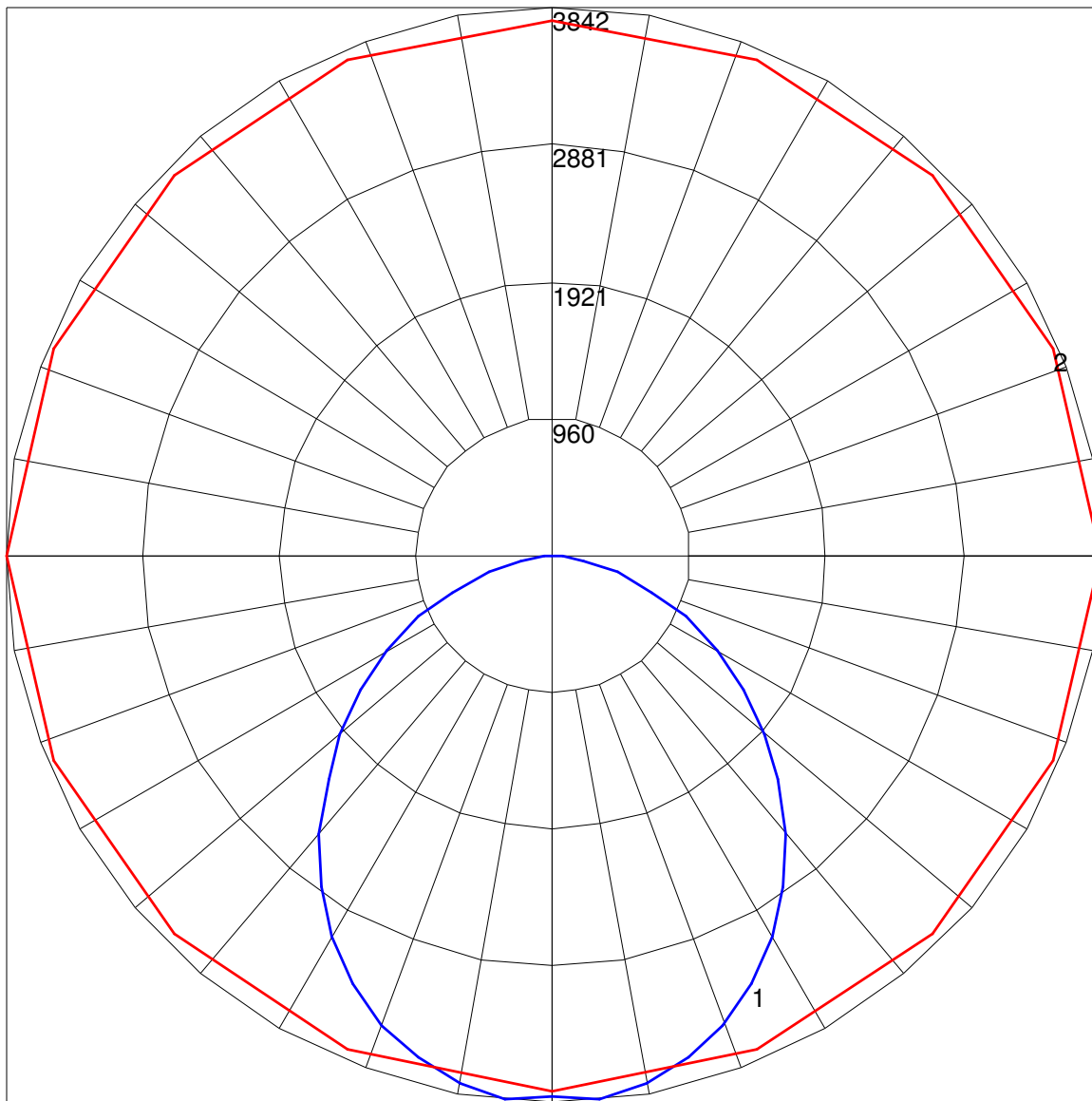
Reflectances

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	16.6	18.3	17.0	18.6	18.9	18.3	20.0	18.7	20.3	20.6
	3H	18.2	19.7	18.6	20.0	20.4	20.7	22.2	21.1	22.5	22.9
	4H	18.7	20.1	19.1	20.5	20.9	21.7	23.2	22.1	23.5	23.9
	6H	19.0	20.4	19.4	20.7	21.1	22.6	23.9	23.0	24.3	24.7
	8H	19.1	20.4	19.5	20.8	21.2	22.8	24.1	23.2	24.5	24.9
	12H	19.1	20.4	19.6	20.7	21.2	22.9	24.2	23.4	24.5	25.0
4H	2H	17.6	19.0	18.0	19.3	19.7	18.9	20.3	19.3	20.7	21.0
	3H	19.4	20.6	19.8	21.0	21.4	21.5	22.7	21.9	23.1	23.5
	4H	20.1	21.2	20.5	21.6	22.1	22.8	23.9	23.2	24.3	24.7
	6H	20.6	21.5	21.0	22.0	22.4	23.8	24.8	24.3	25.2	25.6
	8H	20.7	21.6	21.2	22.0	22.5	24.1	25.0	24.6	25.4	25.9
	12H	20.8	21.6	21.2	22.0	22.5	24.3	25.1	24.7	25.5	26.0
8H	4H	20.9	21.8	21.3	22.2	22.7	23.1	24.0	23.6	24.4	24.9
	6H	21.5	22.3	22.0	22.8	23.2	24.3	25.0	24.8	25.5	26.0
	8H	21.8	22.4	22.3	22.9	23.4	24.7	25.4	25.2	25.9	26.4
	12H	21.9	22.5	22.4	23.0	23.5	24.9	25.5	25.4	26.0	26.6
12H	4H	21.0	21.8	21.5	22.3	22.8	23.1	23.9	23.6	24.4	24.9
	6H	21.8	22.5	22.3	22.9	23.5	24.4	25.0	24.9	25.5	26.0
	8H	22.1	22.7	22.6	23.2	23.7	24.8	25.4	25.3	25.9	26.5

Maximum UGR = 26.6

POLAR GRAPH



Maximum Candela = 3841.776 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.)