



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L110-827-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-L110-827-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	10733
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	131
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	4434	4928	5302
55	4034	4782	5346
65	3445	4752	5596
75	2540	4991	6261
85	972	4007	3683

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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	3728.416	3728.416	3728.416	3728.416	3728.416
5	3764.163	3719.479	3696.244	3687.307	3687.307
10	3694.457	3647.985	3635.474	3637.261	3631.899
15	3583.641	3551.468	3546.106	3558.618	3565.767
20	3438.865	3410.268	3422.779	3456.739	3463.888
25	3249.406	3224.383	3269.067	3317.325	3328.049
30	3031.349	3025.987	3086.757	3151.102	3176.124
35	2775.758	2797.206	2886.573	2968.792	2999.177
40	2505.867	2545.189	2682.815	2777.545	2813.292
45	2182.357	2250.276	2425.437	2582.724	2609.534
50	1912.467	1996.472	2168.058	2321.770	2366.454
55	1610.404	1694.410	1908.892	2073.328	2134.098
60	1313.704	1406.646	1635.427	1833.823	1891.018
65	1013.429	1142.118	1397.709	1590.743	1646.151
70	732.814	877.590	1142.118	1347.663	1392.347
75	457.562	634.510	899.038	1083.135	1127.819
80	219.844	411.091	652.383	738.176	713.153
85	58.983	203.758	243.080	216.270	223.419
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1355.58	N.A.	12.60
0-30	2865.07	N.A.	26.70
0-40	4671.4	N.A.	43.50
0-60	8225.24	N.A.	76.60
0-80	10468.94	N.A.	97.50
0-90	10732.71	N.A.	100.00
10-90	10380.77	N.A.	96.70
20-40	3315.83	N.A.	30.90
20-50	5179.85	N.A.	48.30
40-70	4905.48	N.A.	45.70
60-80	2243.7	N.A.	20.90
70-80	892.06	N.A.	8.30
80-90	263.77	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	10732.71	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	351.94
10-20	1003.64
20-30	1509.49
30-40	1806.33
40-50	1864.02
50-60	1689.81
60-70	1351.65
70-80	892.06
80-90	263.77
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

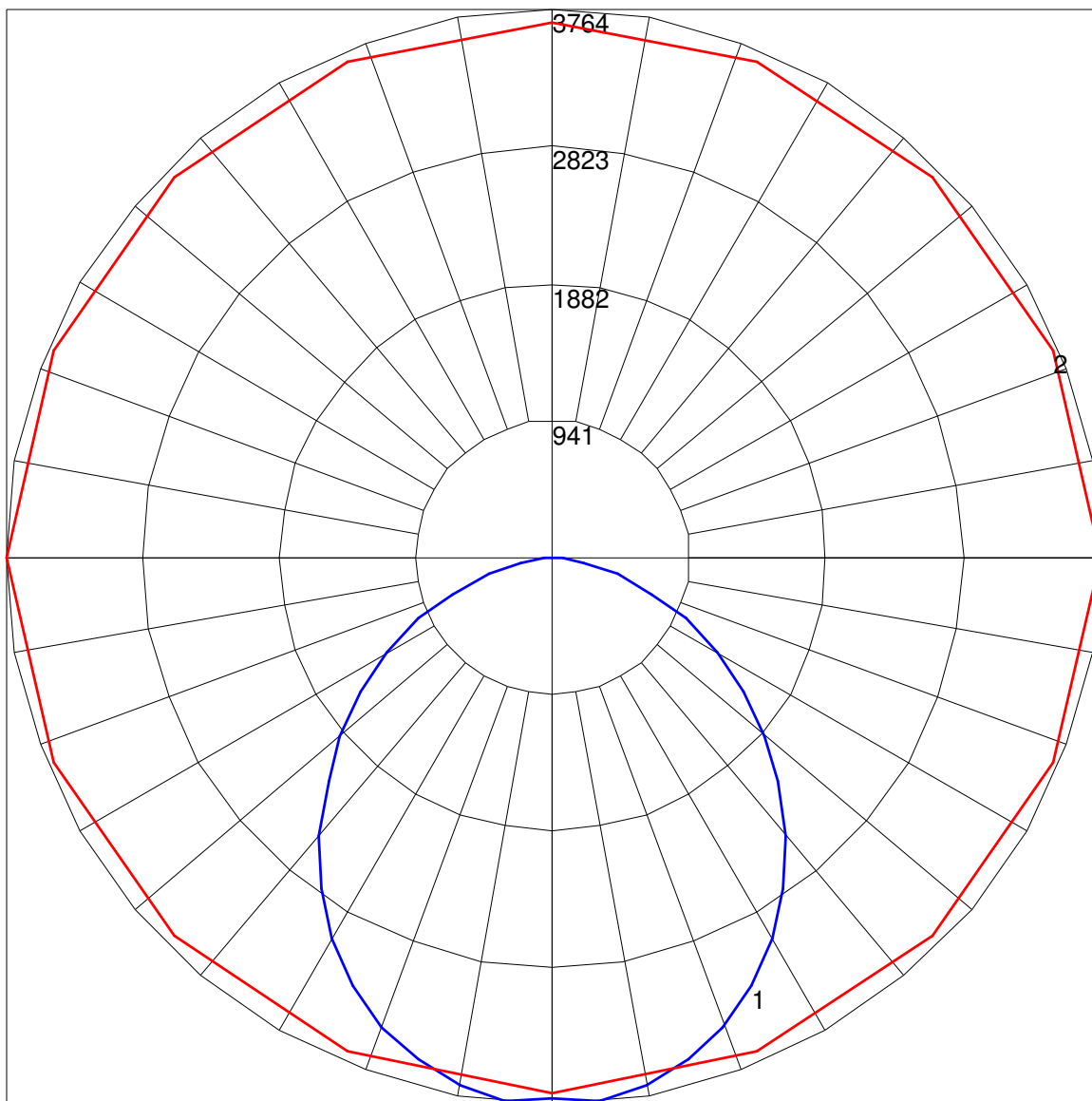
Reflectances

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	16.5	18.2	16.9	18.5	18.8	18.2	19.9	18.6	20.2	20.5
	3H	18.1	19.6	18.5	19.9	20.3	20.6	22.1	21.0	22.4	22.8
	4H	18.6	20.0	19.0	20.4	20.8	21.6	23.1	22.0	23.4	23.8
	6H	18.9	20.3	19.3	20.6	21.0	22.5	23.8	22.9	24.2	24.6
	8H	19.0	20.3	19.4	20.7	21.1	22.7	24.0	23.1	24.4	24.8
	12H	19.0	20.3	19.5	20.6	21.1	22.8	24.1	23.3	24.4	24.9
4H	2H	17.5	18.9	17.9	19.2	19.6	18.8	20.2	19.2	20.6	20.9
	3H	19.3	20.5	19.7	20.9	21.3	21.4	22.6	21.8	23.0	23.4
	4H	20.0	21.1	20.4	21.5	22.0	22.7	23.8	23.1	24.2	24.6
	6H	20.5	21.4	20.9	21.9	22.3	23.7	24.7	24.2	25.1	25.5
	8H	20.6	21.5	21.1	21.9	22.4	24.0	24.9	24.5	25.3	25.8
	12H	20.7	21.5	21.1	21.9	22.4	24.2	25.0	24.6	25.4	25.9
8H	4H	20.8	21.7	21.2	22.1	22.6	23.0	23.9	23.5	24.3	24.8
	6H	21.4	22.2	21.9	22.7	23.1	24.2	24.9	24.7	25.4	25.9
	8H	21.7	22.3	22.2	22.8	23.3	24.6	25.3	25.1	25.8	26.3
	12H	21.8	22.4	22.3	22.9	23.4	24.8	25.4	25.3	25.9	26.5
12H	4H	20.9	21.7	21.4	22.2	22.7	23.0	23.8	23.5	24.3	24.8
	6H	21.7	22.4	22.2	22.8	23.4	24.3	24.9	24.8	25.4	25.9
	8H	22.0	22.6	22.5	23.1	23.6	24.7	25.3	25.2	25.8	26.4

Maximum UGR = 26.5

POLAR GRAPH



Maximum Candela = 3764.163 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.)