



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L82-827-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-L82-827-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	7967
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	64.3
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	3292	3658	3936
55	2995	3550	3968
65	2558	3527	4154
75	1886	3705	4648
85	722	2975	2734

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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	2767.755	2767.755	2767.755	2767.755	2767.755
5	2794.291	2761.121	2743.872	2737.238	2737.238
10	2742.545	2708.048	2698.760	2700.087	2696.106
15	2660.282	2636.399	2632.419	2641.706	2647.014
20	2552.809	2531.580	2540.868	2566.078	2571.385
25	2412.166	2393.590	2426.761	2462.585	2470.546
30	2250.293	2246.313	2291.425	2339.191	2357.766
35	2060.558	2076.479	2142.821	2203.855	2226.411
40	1860.207	1889.397	1991.563	2061.884	2088.421
45	1620.052	1670.471	1800.500	1917.261	1937.163
50	1419.702	1482.062	1609.437	1723.544	1756.715
55	1195.468	1257.829	1417.048	1539.116	1584.228
60	975.216	1044.210	1214.044	1361.321	1403.780
65	752.309	847.841	1037.576	1180.873	1222.005
70	543.998	651.471	847.841	1000.425	1033.596
75	339.667	471.023	667.392	804.055	837.226
80	163.199	305.170	484.291	547.978	529.403
85	43.785	151.258	180.448	160.546	165.853
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1006.3	N.A.	12.60
0-30	2126.86	N.A.	26.70
0-40	3467.77	N.A.	43.50
0-60	6105.93	N.A.	76.60
0-80	7771.52	N.A.	97.50
0-90	7967.33	N.A.	100.00
10-90	7706.07	N.A.	96.70
20-40	2461.47	N.A.	30.90
20-50	3845.21	N.A.	48.30
40-70	3641.54	N.A.	45.70
60-80	1665.59	N.A.	20.90
70-80	662.21	N.A.	8.30
80-90	195.81	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	7967.33	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	261.26
10-20	745.04
20-30	1120.56
30-40	1340.91
40-50	1383.74
50-60	1254.41
60-70	1003.38
70-80	662.21
80-90	195.81
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

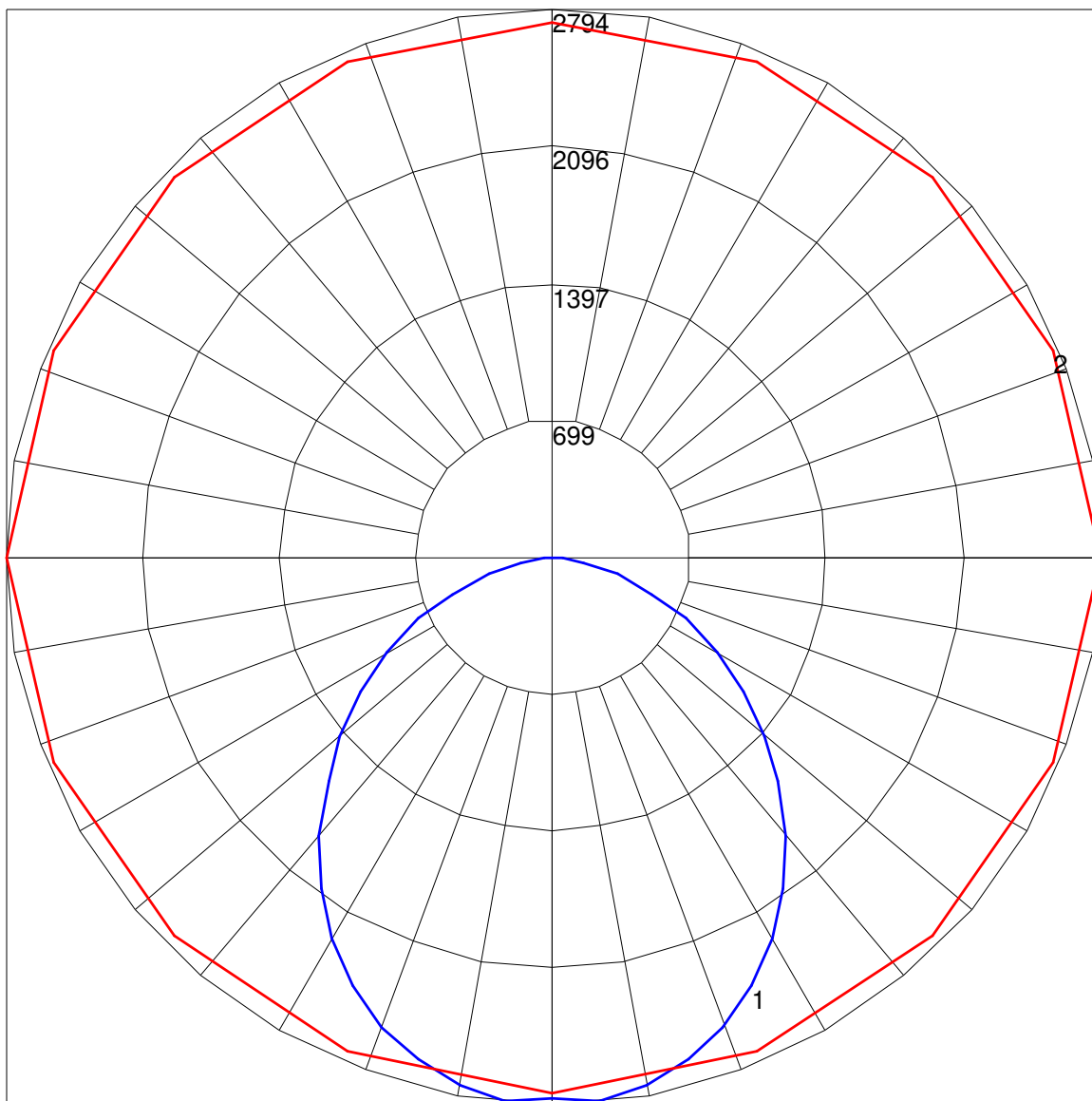
Reflectances

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	15.5	17.2	15.9	17.5	17.8	17.2	18.9	17.6	19.2	19.5
	3H	17.1	18.6	17.5	18.9	19.3	19.6	21.1	20.0	21.4	21.8
	4H	17.6	19.0	18.0	19.4	19.8	20.6	22.1	21.0	22.4	22.8
	6H	17.9	19.3	18.3	19.6	20.0	21.5	22.8	21.9	23.2	23.6
	8H	18.0	19.3	18.4	19.7	20.1	21.7	23.0	22.1	23.4	23.8
	12H	18.0	19.3	18.5	19.6	20.1	21.8	23.1	22.3	23.4	23.9
4H	2H	16.5	17.9	16.9	18.2	18.6	17.8	19.2	18.2	19.6	19.9
	3H	18.3	19.5	18.7	19.9	20.3	20.4	21.6	20.8	22.0	22.4
	4H	19.0	20.1	19.4	20.5	21.0	21.7	22.8	22.1	23.2	23.6
	6H	19.5	20.4	19.9	20.9	21.3	22.7	23.7	23.2	24.1	24.5
	8H	19.6	20.5	20.1	20.9	21.4	23.0	23.9	23.5	24.3	24.8
	12H	19.7	20.5	20.1	20.9	21.4	23.2	24.0	23.6	24.4	24.9
8H	4H	19.8	20.7	20.2	21.1	21.6	22.0	22.9	22.5	23.3	23.8
	6H	20.4	21.2	20.9	21.7	22.1	23.2	23.9	23.7	24.4	24.9
	8H	20.7	21.3	21.2	21.8	22.3	23.6	24.3	24.1	24.8	25.3
	12H	20.8	21.4	21.3	21.9	22.4	23.8	24.4	24.3	24.9	25.5
12H	4H	19.9	20.7	20.4	21.2	21.7	22.0	22.8	22.5	23.3	23.8
	6H	20.7	21.4	21.2	21.8	22.4	23.3	23.9	23.8	24.4	24.9
	8H	21.0	21.6	21.5	22.1	22.6	23.7	24.3	24.2	24.8	25.4

Maximum UGR = 25.5

POLAR GRAPH



Maximum Candela = 2794.291 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.)