



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L110-940-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-L110-940-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	9516
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	116
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	3931	4369	4701
55	3576	4239	4739
65	3055	4213	4962
75	2252	4425	5551
85	862	3553	3265

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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	3305.607	3305.607	3305.607	3305.607	3305.607
5	3337.300	3297.684	3277.083	3269.160	3269.160
10	3275.498	3234.297	3223.205	3224.789	3220.035
15	3177.249	3148.725	3143.971	3155.064	3161.403
20	3048.892	3023.537	3034.630	3064.738	3071.077
25	2880.917	2858.732	2898.349	2941.135	2950.643
30	2687.589	2682.835	2736.713	2793.761	2815.946
35	2460.982	2479.998	2559.231	2632.125	2659.065
40	2221.698	2256.560	2378.579	2462.566	2494.260
45	1934.874	1995.091	2150.388	2289.838	2313.608
50	1695.589	1770.069	1922.196	2058.477	2098.094
55	1427.781	1502.261	1692.420	1838.209	1892.088
60	1164.727	1247.130	1449.967	1625.864	1676.573
65	898.504	1012.600	1239.206	1410.350	1459.475
70	649.712	778.070	1012.600	1194.836	1234.453
75	405.674	562.555	797.086	960.306	999.922
80	194.914	364.472	578.402	654.466	632.281
85	52.294	180.652	215.514	191.744	198.083
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1201.85	N.A.	12.60
0-30	2540.17	N.A.	26.70
0-40	4141.66	N.A.	43.50
0-60	7292.48	N.A.	76.60
0-80	9281.74	N.A.	97.50
0-90	9515.6	N.A.	100.00
10-90	9203.58	N.A.	96.70
20-40	2939.8	N.A.	30.90
20-50	4592.44	N.A.	48.30
40-70	4349.19	N.A.	45.70
60-80	1989.26	N.A.	20.90
70-80	790.89	N.A.	8.30
80-90	233.86	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	9515.6	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	312.03
10-20	889.83
20-30	1338.31
30-40	1601.49
40-50	1652.64
50-60	1498.18
60-70	1198.37
70-80	790.89
80-90	233.86
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

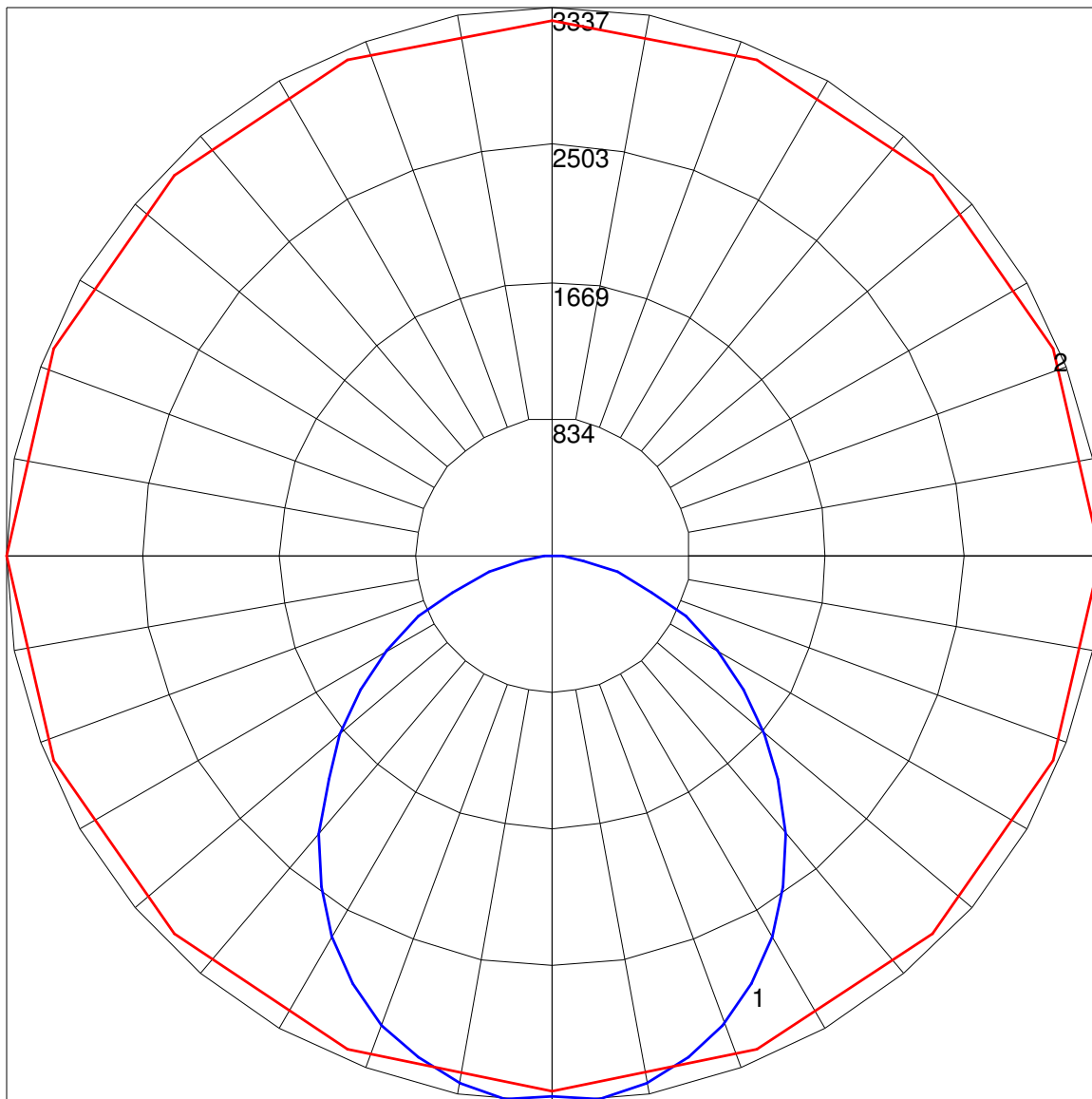
Reflectances

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	16.1	17.8	16.5	18.1	18.4	17.8	19.5	18.2	19.8	20.1
	3H	17.7	19.2	18.1	19.5	19.9	20.2	21.7	20.6	22.0	22.4
	4H	18.2	19.6	18.6	20.0	20.4	21.2	22.7	21.6	23.0	23.4
	6H	18.5	19.9	18.9	20.2	20.6	22.1	23.4	22.5	23.8	24.2
	8H	18.6	19.9	19.0	20.3	20.7	22.3	23.6	22.7	24.0	24.4
	12H	18.6	19.9	19.1	20.2	20.7	22.4	23.7	22.9	24.0	24.5
4H	2H	17.1	18.5	17.5	18.8	19.2	18.4	19.8	18.8	20.2	20.5
	3H	18.9	20.1	19.3	20.5	20.9	21.0	22.2	21.4	22.6	23.0
	4H	19.6	20.7	20.0	21.1	21.6	22.3	23.4	22.7	23.8	24.2
	6H	20.1	21.0	20.5	21.5	21.9	23.3	24.3	23.8	24.7	25.1
	8H	20.2	21.1	20.7	21.5	22.0	23.6	24.5	24.1	24.9	25.4
	12H	20.3	21.1	20.7	21.5	22.0	23.8	24.6	24.2	25.0	25.5
8H	4H	20.4	21.3	20.8	21.7	22.2	22.6	23.5	23.1	23.9	24.4
	6H	21.0	21.8	21.5	22.3	22.7	23.8	24.5	24.3	25.0	25.5
	8H	21.3	21.9	21.8	22.4	22.9	24.2	24.9	24.7	25.4	25.9
	12H	21.4	22.0	21.9	22.5	23.0	24.4	25.0	24.9	25.5	26.1
12H	4H	20.5	21.3	21.0	21.8	22.3	22.6	23.4	23.1	23.9	24.4
	6H	21.3	22.0	21.8	22.4	23.0	23.9	24.5	24.4	25.0	25.5
	8H	21.6	22.2	22.1	22.7	23.2	24.3	24.9	24.8	25.4	26.0

Maximum UGR = 26.1

POLAR GRAPH



Maximum Candela = 3337.3 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.)