



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L110-927-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-L110-927-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	8852
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
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	3657	4064	4373
55	3327	3944	4409
65	2841	3919	4616
75	2095	4116	5163
85	802	3305	3038

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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	3074.983	3074.983	3074.983	3074.983	3074.983
5	3104.465	3067.613	3048.449	3041.079	3041.079
10	3046.975	3008.648	2998.330	2999.804	2995.381
15	2955.581	2929.047	2924.624	2934.943	2940.839
20	2836.178	2812.592	2822.911	2850.919	2856.815
25	2679.923	2659.285	2696.138	2735.939	2744.784
30	2500.082	2495.660	2545.779	2598.847	2619.485
35	2289.285	2306.974	2380.680	2448.488	2473.548
40	2066.695	2099.126	2212.632	2290.759	2320.241
45	1799.882	1855.898	2000.360	2130.082	2152.193
50	1577.292	1646.575	1788.089	1914.862	1951.715
55	1328.169	1397.452	1574.344	1709.962	1760.081
60	1083.467	1160.121	1348.806	1512.432	1559.603
65	835.818	941.953	1152.750	1311.953	1357.651
70	604.383	723.786	941.953	1111.475	1148.328
75	377.371	523.307	741.475	893.308	930.160
80	181.315	339.044	538.048	608.805	588.168
85	48.645	168.048	200.478	178.367	184.263
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1118.00	N.A.	12.60
0-30	2362.95	N.A.	26.70
0-40	3852.7	N.A.	43.50
0-60	6783.7	N.A.	76.60
0-80	8634.18	N.A.	97.50
0-90	8851.72	N.A.	100.00
10-90	8561.46	N.A.	96.70
20-40	2734.7	N.A.	30.90
20-50	4272.04	N.A.	48.30
40-70	4045.76	N.A.	45.70
60-80	1850.48	N.A.	20.90
70-80	735.72	N.A.	8.30
80-90	217.54	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	8851.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	290.26
10-20	827.75
20-30	1244.94
30-40	1489.76
40-50	1537.34
50-60	1393.66
60-70	1114.76
70-80	735.72
80-90	217.54
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

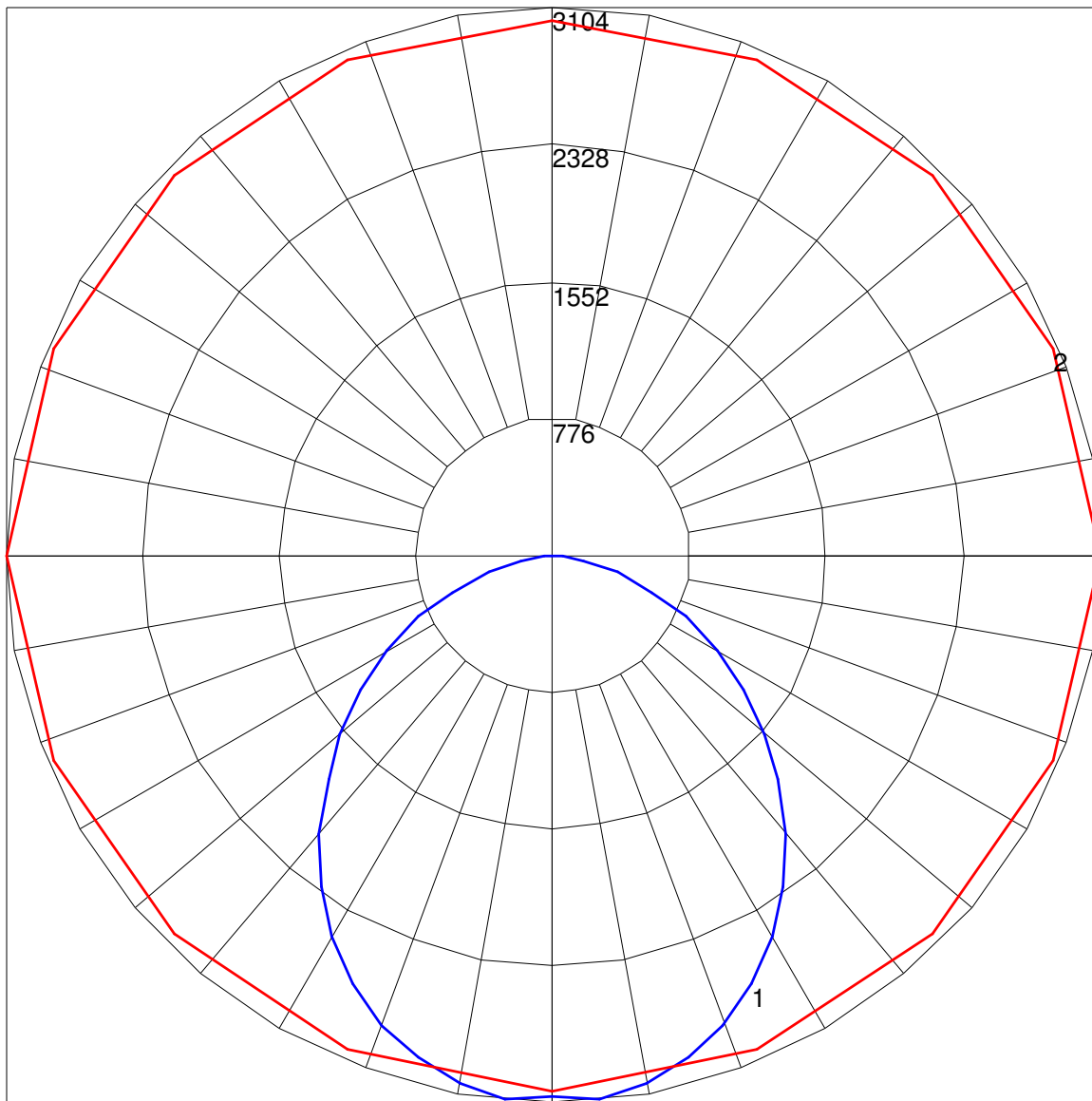
Reflectances

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	15.9	17.6	16.3	17.9	18.2	17.6	19.3	18.0	19.6	19.9
	3H	17.5	19.0	17.9	19.3	19.7	20.0	21.5	20.4	21.8	22.2
	4H	18.0	19.4	18.4	19.8	20.2	21.0	22.5	21.4	22.8	23.2
	6H	18.3	19.7	18.7	20.0	20.4	21.9	23.2	22.3	23.6	24.0
	8H	18.4	19.7	18.8	20.1	20.5	22.1	23.4	22.5	23.8	24.2
	12H	18.4	19.7	18.9	20.0	20.5	22.2	23.5	22.7	23.8	24.3
4H	2H	16.9	18.3	17.3	18.6	19.0	18.2	19.6	18.6	20.0	20.3
	3H	18.7	19.9	19.1	20.3	20.7	20.8	22.0	21.2	22.4	22.8
	4H	19.4	20.5	19.8	20.9	21.4	22.1	23.2	22.5	23.6	24.0
	6H	19.9	20.8	20.3	21.3	21.7	23.1	24.1	23.6	24.5	24.9
	8H	20.0	20.9	20.5	21.3	21.8	23.4	24.3	23.9	24.7	25.2
	12H	20.1	20.9	20.5	21.3	21.8	23.6	24.4	24.0	24.8	25.3
8H	4H	20.2	21.1	20.6	21.5	22.0	22.4	23.3	22.9	23.7	24.2
	6H	20.8	21.6	21.3	22.1	22.5	23.6	24.3	24.1	24.8	25.3
	8H	21.1	21.7	21.6	22.2	22.7	24.0	24.7	24.5	25.2	25.7
	12H	21.2	21.8	21.7	22.3	22.8	24.2	24.8	24.7	25.3	25.9
12H	4H	20.3	21.1	20.8	21.6	22.1	22.4	23.2	22.9	23.7	24.2
	6H	21.1	21.8	21.6	22.2	22.8	23.7	24.3	24.2	24.8	25.3
	8H	21.4	22.0	21.9	22.5	23.0	24.1	24.7	24.6	25.2	25.8

Maximum UGR = 25.9

POLAR GRAPH



Maximum Candela = 3104.465 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.)