



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L64-940-AF-(L60)-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] 10-31-2023
 [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-L64-940-AF-(L60)-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	5422
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	45.6
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	2240	2490	2679
55	2038	2415	2700
65	1740	2400	2827
75	1283	2521	3163
85	491	2024	1861

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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	1883.479	1883.479	1883.479	1883.479	1883.479
5	1901.537	1878.965	1867.227	1862.712	1862.712
10	1866.324	1842.848	1836.528	1837.430	1834.722
15	1810.343	1794.091	1791.382	1797.702	1801.314
20	1737.207	1722.760	1729.081	1746.236	1749.848
25	1641.498	1628.857	1651.430	1675.809	1681.226
30	1531.343	1528.634	1559.333	1591.838	1604.479
35	1402.226	1413.061	1458.206	1499.741	1515.090
40	1265.886	1285.750	1355.274	1403.129	1421.187
45	1102.458	1136.769	1225.255	1304.711	1318.255
50	966.118	1008.555	1095.235	1172.886	1195.458
55	813.526	855.963	964.312	1047.381	1078.080
60	663.642	710.593	826.167	926.390	955.283
65	511.952	576.962	706.079	803.594	831.584
70	370.195	443.331	576.962	680.797	703.370
75	231.146	320.535	454.166	547.166	569.739
80	111.058	207.670	329.564	372.904	360.263
85	29.796	102.932	122.796	109.253	112.864
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	684.80	N.A.	12.60
0-30	1447.34	N.A.	26.70
0-40	2359.85	N.A.	43.50
0-60	4155.13	N.A.	76.60
0-80	5288.58	N.A.	97.50
0-90	5421.83	N.A.	100.00
10-90	5244.04	N.A.	96.70
20-40	1675.05	N.A.	30.90
20-50	2616.7	N.A.	48.30
40-70	2478.1	N.A.	45.70
60-80	1133.45	N.A.	20.90
70-80	450.64	N.A.	8.30
80-90	133.25	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	5421.83	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	177.79
10-20	507.01
20-30	762.55
30-40	912.50
40-50	941.65
50-60	853.64
60-70	682.81
70-80	450.64
80-90	133.25
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

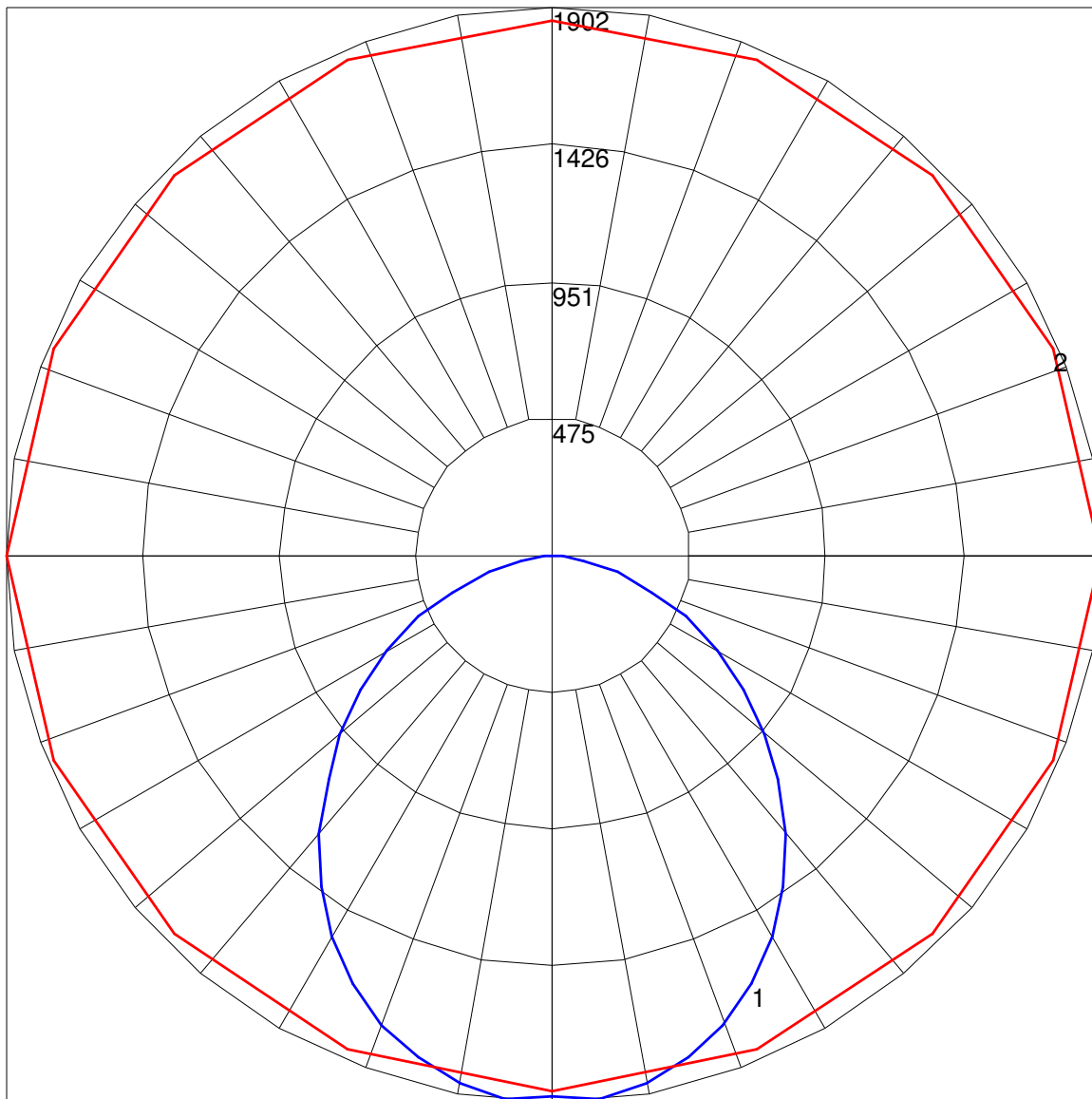
Reflectances

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	14.2	15.9	14.6	16.2	16.5	15.9	17.6	16.3	17.9	18.2
	3H	15.8	17.3	16.2	17.6	18.0	18.3	19.8	18.7	20.1	20.5
	4H	16.3	17.7	16.7	18.1	18.5	19.3	20.8	19.7	21.1	21.5
	6H	16.6	18.0	17.0	18.3	18.7	20.2	21.5	20.6	21.9	22.3
	8H	16.7	18.0	17.1	18.4	18.8	20.4	21.7	20.8	22.1	22.5
	12H	16.7	18.0	17.2	18.3	18.8	20.5	21.8	21.0	22.1	22.6
4H	2H	15.2	16.6	15.6	16.9	17.3	16.5	17.9	16.9	18.3	18.6
	3H	17.0	18.2	17.4	18.6	19.0	19.1	20.3	19.5	20.7	21.1
	4H	17.7	18.8	18.1	19.2	19.7	20.4	21.5	20.8	21.9	22.3
	6H	18.2	19.1	18.6	19.6	20.0	21.4	22.4	21.9	22.8	23.2
	8H	18.3	19.2	18.8	19.6	20.1	21.7	22.6	22.2	23.0	23.5
	12H	18.4	19.2	18.8	19.6	20.1	21.9	22.7	22.3	23.1	23.6
8H	4H	18.5	19.4	18.9	19.8	20.3	20.7	21.6	21.2	22.0	22.5
	6H	19.1	19.9	19.6	20.4	20.8	21.9	22.6	22.4	23.1	23.6
	8H	19.4	20.0	19.9	20.5	21.0	22.3	23.0	22.8	23.5	24.0
	12H	19.5	20.1	20.0	20.6	21.1	22.5	23.1	23.0	23.6	24.2
12H	4H	18.6	19.4	19.1	19.9	20.4	20.7	21.5	21.2	22.0	22.5
	6H	19.4	20.1	19.9	20.5	21.1	22.0	22.6	22.5	23.1	23.6
	8H	19.7	20.3	20.2	20.8	21.3	22.4	23.0	22.9	23.5	24.1

Maximum UGR = 24.2

POLAR GRAPH



Maximum Candela = 1901.537 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.)