



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L52-950-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-L52-950-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	4630
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	37.2
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	1913	2126	2287
55	1740	2063	2306
65	1486	2050	2414
75	1096	2153	2701
85	419	1728	1589

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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	1608.280	1608.280	1608.280	1608.280	1608.280
5	1623.700	1604.425	1594.402	1590.547	1590.547
10	1593.631	1573.586	1568.189	1568.960	1566.647
15	1545.830	1531.952	1529.639	1535.036	1538.120
20	1483.380	1471.044	1476.441	1491.090	1494.174
25	1401.655	1390.861	1410.136	1430.953	1435.579
30	1307.595	1305.282	1331.495	1359.251	1370.045
35	1197.344	1206.595	1245.145	1280.610	1293.717
40	1080.924	1097.886	1157.252	1198.115	1213.534
45	941.376	970.673	1046.230	1114.077	1125.642
50	824.957	861.193	935.208	1001.513	1020.787
55	694.660	730.896	823.415	894.346	920.559
60	566.676	606.767	705.454	791.033	815.705
65	437.150	492.661	602.912	686.179	710.079
70	316.105	378.555	492.661	581.325	600.599
75	197.373	273.701	387.807	467.218	486.493
80	94.831	177.327	281.410	318.418	307.624
85	25.443	87.893	104.854	93.289	96.373
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	584.74	N.A.	12.60
0-30	1235.87	N.A.	26.70
0-40	2015.04	N.A.	43.50
0-60	3548.02	N.A.	76.60
0-80	4515.85	N.A.	97.50
0-90	4629.63	N.A.	100.00
10-90	4477.82	N.A.	96.70
20-40	1430.31	N.A.	30.90
20-50	2234.37	N.A.	48.30
40-70	2116.02	N.A.	45.70
60-80	967.84	N.A.	20.90
70-80	384.79	N.A.	8.30
80-90	113.78	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	4629.63	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	151.81
10-20	432.93
20-30	651.13
30-40	779.17
40-50	804.06
50-60	728.91
60-70	583.04
70-80	384.79
80-90	113.78
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

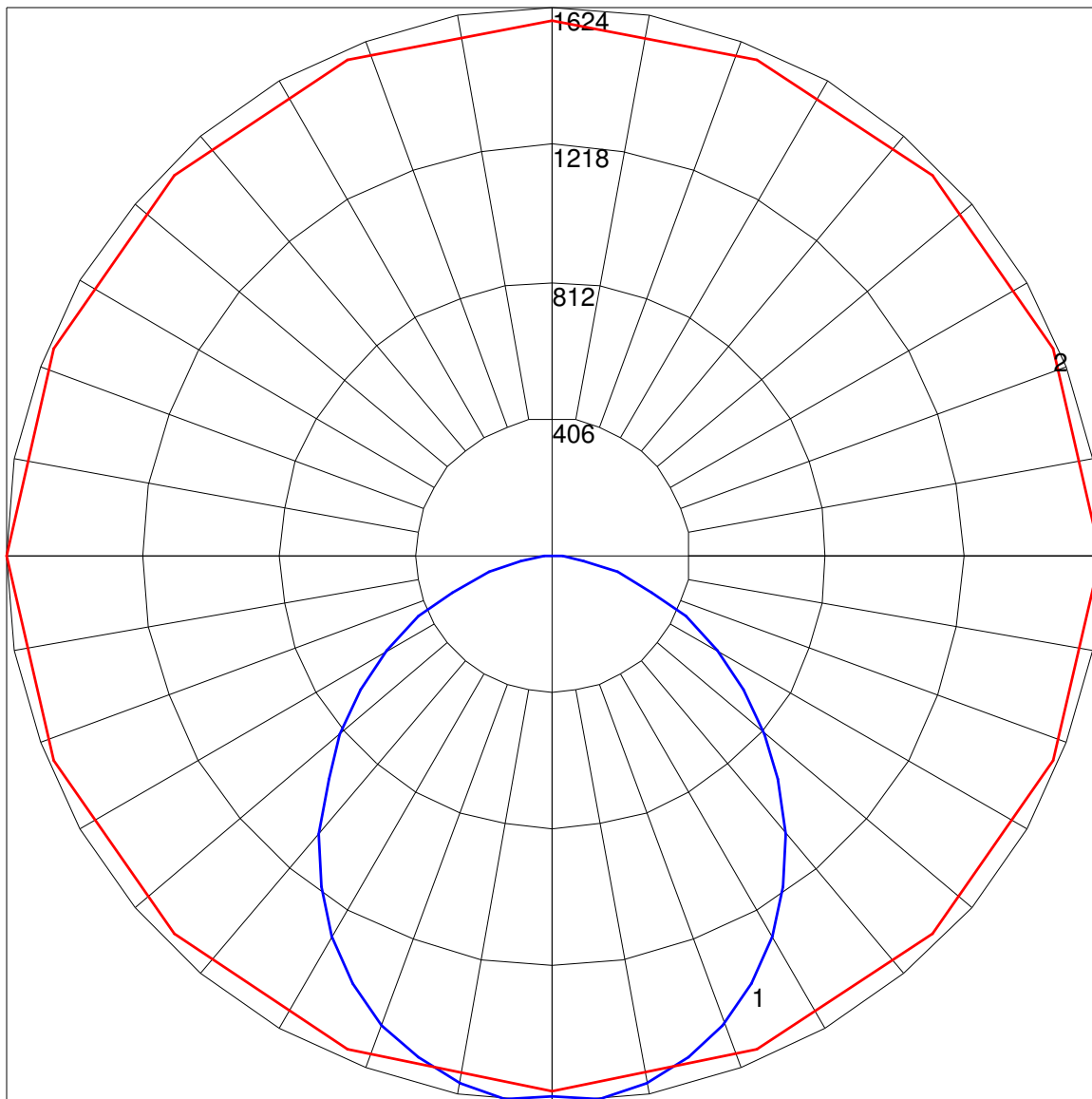
Reflectances

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	13.6	15.3	14.0	15.6	15.9	15.3	17.0	15.7	17.3	17.6
	3H	15.2	16.7	15.6	17.0	17.4	17.7	19.2	18.1	19.5	19.9
	4H	15.7	17.1	16.1	17.5	17.9	18.7	20.2	19.1	20.5	20.9
	6H	16.0	17.4	16.4	17.7	18.1	19.6	20.9	20.0	21.3	21.7
	8H	16.1	17.4	16.5	17.8	18.2	19.8	21.1	20.2	21.5	21.9
	12H	16.1	17.4	16.6	17.7	18.2	19.9	21.2	20.4	21.5	22.0
4H	2H	14.6	16.0	15.0	16.3	16.7	15.9	17.3	16.3	17.7	18.0
	3H	16.4	17.6	16.8	18.0	18.4	18.5	19.7	18.9	20.1	20.5
	4H	17.1	18.2	17.5	18.6	19.1	19.8	20.9	20.2	21.3	21.7
	6H	17.6	18.5	18.0	19.0	19.4	20.8	21.8	21.3	22.2	22.6
	8H	17.7	18.6	18.2	19.0	19.5	21.1	22.0	21.6	22.4	22.9
	12H	17.8	18.6	18.2	19.0	19.5	21.3	22.1	21.7	22.5	23.0
8H	4H	17.9	18.8	18.3	19.2	19.7	20.1	21.0	20.6	21.4	21.9
	6H	18.5	19.3	19.0	19.8	20.2	21.3	22.0	21.8	22.5	23.0
	8H	18.8	19.4	19.3	19.9	20.4	21.7	22.4	22.2	22.9	23.4
	12H	18.9	19.5	19.4	20.0	20.5	21.9	22.5	22.4	23.0	23.6
12H	4H	18.0	18.8	18.5	19.3	19.8	20.1	20.9	20.6	21.4	21.9
	6H	18.8	19.5	19.3	19.9	20.5	21.4	22.0	21.9	22.5	23.0
	8H	19.1	19.7	19.6	20.2	20.7	21.8	22.4	22.3	22.9	23.5

Maximum UGR = 23.6

POLAR GRAPH



Maximum Candela = 1623.7 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.)