



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L52-840-AF-(L48)-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
 [ISSUE DATE] 01-09-2024
 [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-L52-840-AF-(L48)-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	4995
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	144
Total Luminaire Watts	34.8
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	2064	2293	2468
55	1877	2225	2488
65	1603	2211	2604
75	1182	2323	2914
85	453	1865	1714

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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	1735.149	1735.149	1735.149	1735.149	1735.149
5	1751.785	1730.990	1720.176	1716.017	1716.017
10	1719.345	1697.718	1691.895	1692.727	1690.231
15	1667.773	1652.800	1650.305	1656.127	1659.455
20	1600.396	1587.087	1592.910	1608.714	1612.042
25	1512.225	1500.579	1521.375	1543.833	1548.824
30	1410.744	1408.249	1436.530	1466.475	1478.121
35	1291.796	1301.778	1343.368	1381.631	1395.772
40	1166.193	1184.493	1248.542	1292.628	1309.264
45	1015.636	1047.245	1128.762	1201.961	1214.438
50	890.033	929.128	1008.982	1080.517	1101.312
55	749.458	788.553	888.370	964.896	993.177
60	611.378	654.632	761.103	853.434	880.052
65	471.634	531.525	650.473	740.308	766.094
70	341.041	408.417	531.525	627.182	647.977
75	212.943	295.291	418.399	504.075	524.870
80	102.312	191.316	303.609	343.536	331.891
85	27.450	94.826	113.126	100.649	103.976
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	630.87	N.A.	12.60
0-30	1333.36	N.A.	26.70
0-40	2174.00	N.A.	43.50
0-60	3827.9	N.A.	76.60
0-80	4872.09	N.A.	97.50
0-90	4994.84	N.A.	100.00
10-90	4831.06	N.A.	96.70
20-40	1543.14	N.A.	30.90
20-50	2410.62	N.A.	48.30
40-70	2282.94	N.A.	45.70
60-80	1044.19	N.A.	20.90
70-80	415.15	N.A.	8.30
80-90	122.76	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	4994.84	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	163.79
10-20	467.08
20-30	702.50
30-40	840.64
40-50	867.49
50-60	786.41
60-70	629.04
70-80	415.15
80-90	122.76
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

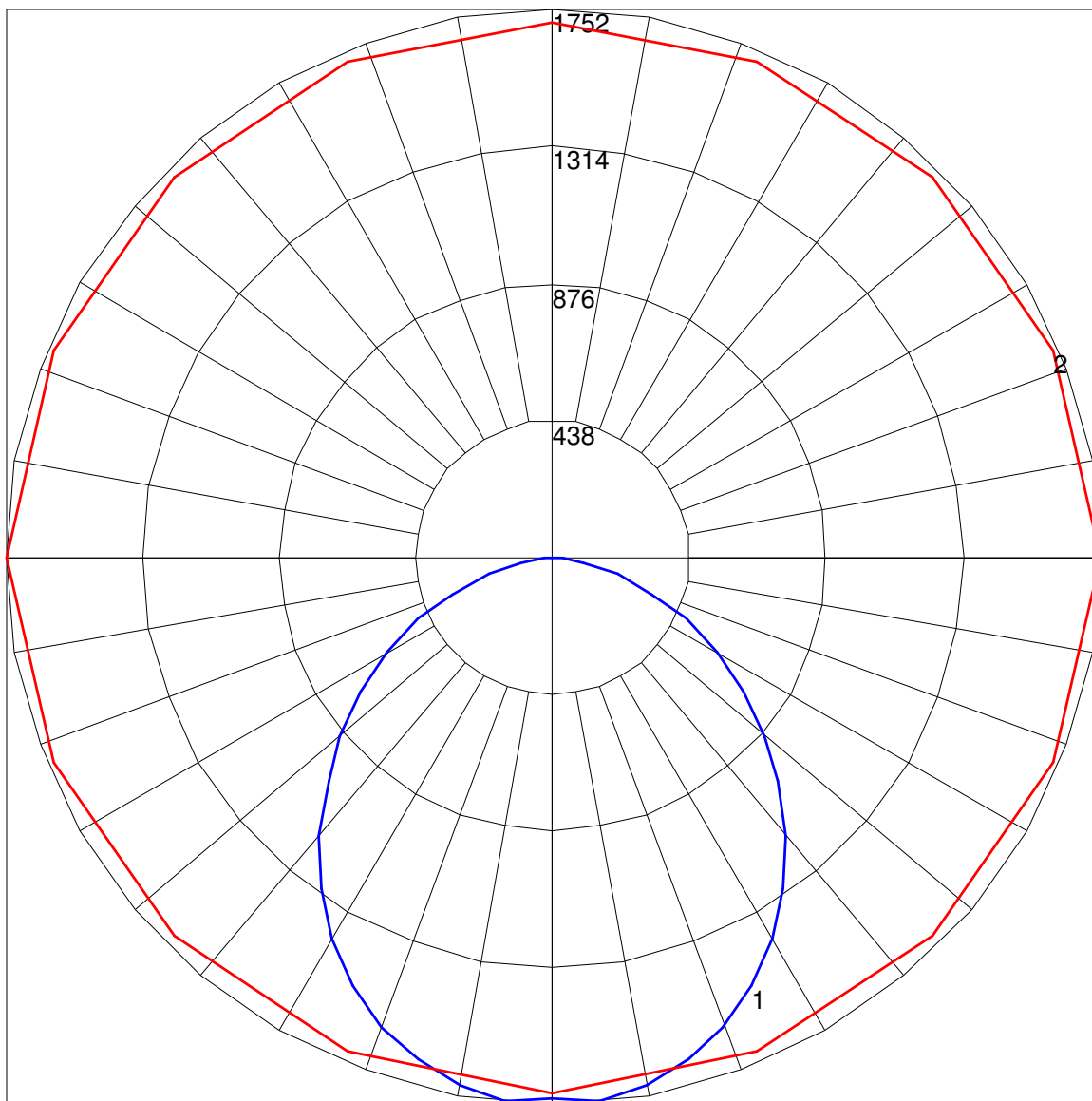
Reflectances

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	13.9	15.6	14.3	15.9	16.2	15.6	17.3	16.0	17.6	17.9
	3H	15.5	17.0	15.9	17.3	17.7	18.0	19.5	18.4	19.8	20.2
	4H	16.0	17.4	16.4	17.8	18.2	19.0	20.5	19.4	20.8	21.2
	6H	16.3	17.7	16.7	18.0	18.4	19.9	21.2	20.3	21.6	22.0
	8H	16.4	17.7	16.8	18.1	18.5	20.1	21.4	20.5	21.8	22.2
	12H	16.4	17.7	16.9	18.0	18.5	20.2	21.5	20.7	21.8	22.3
4H	2H	14.9	16.3	15.3	16.6	17.0	16.2	17.6	16.6	18.0	18.3
	3H	16.7	17.9	17.1	18.3	18.7	18.8	20.0	19.2	20.4	20.8
	4H	17.4	18.5	17.8	18.9	19.4	20.1	21.2	20.5	21.6	22.0
	6H	17.9	18.8	18.3	19.3	19.7	21.1	22.1	21.6	22.5	22.9
	8H	18.0	18.9	18.5	19.3	19.8	21.4	22.3	21.9	22.7	23.2
	12H	18.1	18.9	18.5	19.3	19.8	21.6	22.4	22.0	22.8	23.3
8H	4H	18.2	19.1	18.6	19.5	20.0	20.4	21.3	20.9	21.7	22.2
	6H	18.8	19.6	19.3	20.1	20.5	21.6	22.3	22.1	22.8	23.3
	8H	19.1	19.7	19.6	20.2	20.7	22.0	22.7	22.5	23.2	23.7
	12H	19.2	19.8	19.7	20.3	20.8	22.2	22.8	22.7	23.3	23.9
12H	4H	18.3	19.1	18.8	19.6	20.1	20.4	21.2	20.9	21.7	22.2
	6H	19.1	19.8	19.6	20.2	20.8	21.7	22.3	22.2	22.8	23.3
	8H	19.4	20.0	19.9	20.5	21.0	22.1	22.7	22.6	23.2	23.8

Maximum UGR = 23.9

POLAR GRAPH



Maximum Candela = 1751.785 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.)