



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L64-950-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-L64-950-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	5692
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	48.5
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	2352	2614	2812
55	2139	2536	2835
65	1827	2520	2968
75	1347	2647	3320
85	516	2125	1953

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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	1977.424	1977.424	1977.424	1977.424	1977.424
5	1996.383	1972.684	1960.361	1955.621	1955.621
10	1959.413	1934.766	1928.131	1929.079	1926.235
15	1900.640	1883.577	1880.733	1887.369	1891.160
20	1823.856	1808.689	1815.324	1833.336	1837.127
25	1723.373	1710.102	1733.801	1759.395	1765.083
30	1607.723	1604.880	1637.110	1671.236	1684.507
35	1472.167	1483.542	1530.939	1574.545	1590.660
40	1329.026	1349.881	1422.873	1473.114	1492.073
45	1157.447	1193.469	1286.368	1369.788	1384.007
50	1014.307	1058.860	1149.864	1231.387	1255.086
55	854.103	898.657	1012.411	1099.622	1131.852
60	696.743	746.037	867.374	972.597	1002.931
65	537.488	605.740	741.297	843.676	873.062
70	388.660	465.444	605.740	714.754	738.453
75	242.675	336.522	476.819	574.458	598.157
80	116.598	218.029	346.002	391.503	378.232
85	31.282	108.066	128.921	114.702	118.494
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	718.95	N.A.	12.60
0-30	1519.53	N.A.	26.70
0-40	2477.55	N.A.	43.50
0-60	4362.38	N.A.	76.60
0-80	5552.37	N.A.	97.50
0-90	5692.26	N.A.	100.00
10-90	5505.61	N.A.	96.70
20-40	1758.6	N.A.	30.90
20-50	2747.21	N.A.	48.30
40-70	2601.7	N.A.	45.70
60-80	1189.98	N.A.	20.90
70-80	473.12	N.A.	8.30
80-90	139.90	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	5692.26	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	186.65
10-20	532.30
20-30	800.58
30-40	958.02
40-50	988.61
50-60	896.22
60-70	716.87
70-80	473.12
80-90	139.90
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	71	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

X=2H	Y=2H	14.3	16.0	14.7	16.3	16.6	16.0	17.7	16.4	18.0	18.3
	3H	15.9	17.4	16.3	17.7	18.1	18.4	19.9	18.8	20.2	20.6
	4H	16.4	17.8	16.8	18.2	18.6	19.4	20.9	19.8	21.2	21.6
	6H	16.7	18.1	17.1	18.4	18.8	20.3	21.6	20.7	22.0	22.4
	8H	16.8	18.1	17.2	18.5	18.9	20.5	21.8	20.9	22.2	22.6
	12H	16.8	18.1	17.3	18.4	18.9	20.6	21.9	21.1	22.2	22.7

UGR Viewed Endwise

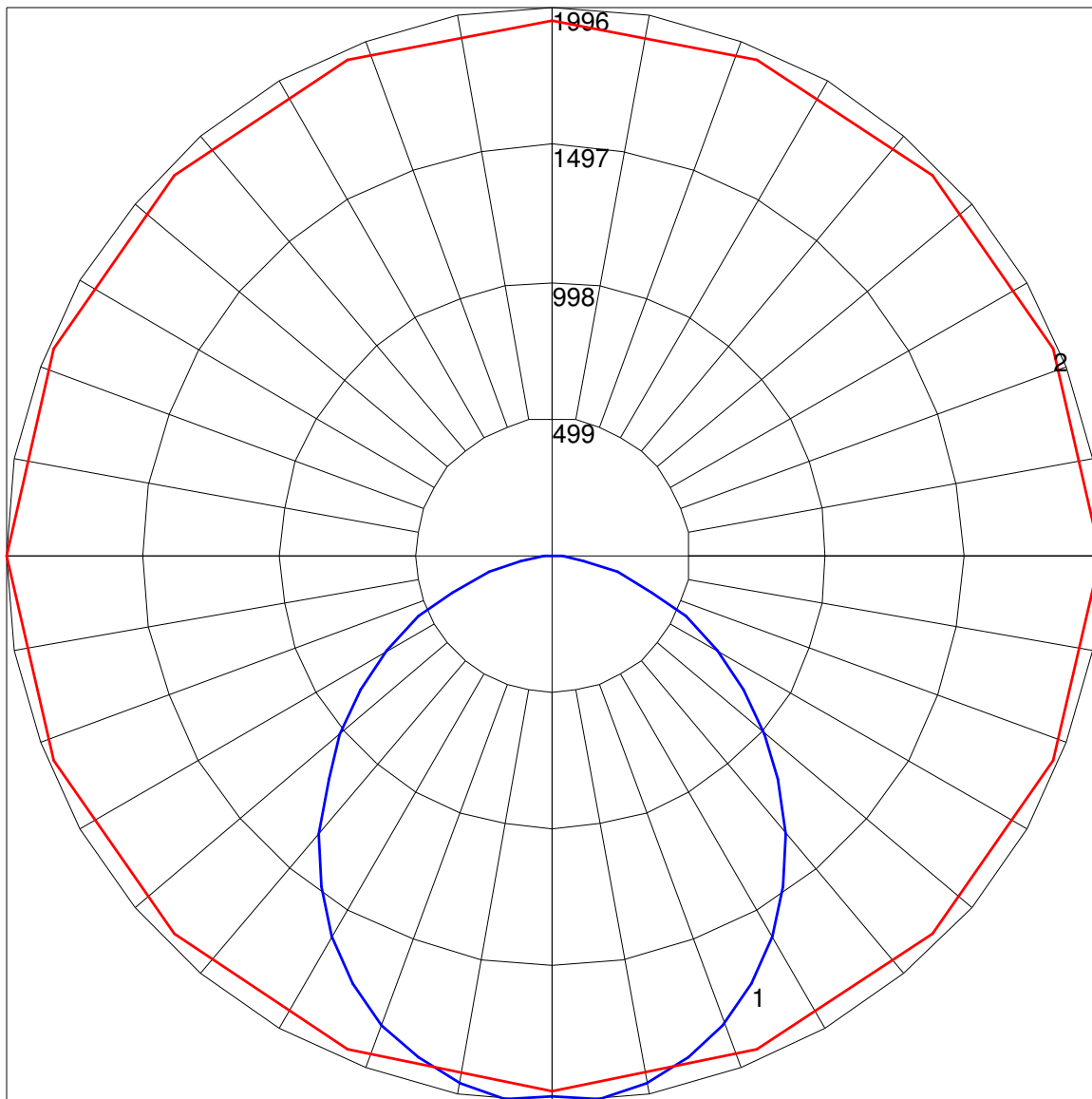
4H	2H	15.3	16.7	15.7	17.0	17.4	16.6	18.0	17.0	18.4	18.7
	3H	17.1	18.3	17.5	18.7	19.1	19.2	20.4	19.6	20.8	21.2
	4H	17.8	18.9	18.2	19.3	19.8	20.5	21.6	20.9	22.0	22.4
	6H	18.3	19.2	18.7	19.7	20.1	21.5	22.5	22.0	22.9	23.3
	8H	18.4	19.3	18.9	19.7	20.2	21.8	22.7	22.3	23.1	23.6
	12H	18.5	19.3	18.9	19.7	20.2	22.0	22.8	22.4	23.2	23.7

8H	4H	18.6	19.5	19.0	19.9	20.4	20.8	21.7	21.3	22.1	22.6
	6H	19.2	20.0	19.7	20.5	20.9	22.0	22.7	22.5	23.2	23.7
	8H	19.5	20.1	20.0	20.6	21.1	22.4	23.1	22.9	23.6	24.1
	12H	19.6	20.2	20.1	20.7	21.2	22.6	23.2	23.1	23.7	24.3

12H	4H	18.7	19.5	19.2	20.0	20.5	20.8	21.6	21.3	22.1	22.6
	6H	19.5	20.2	20.0	20.6	21.2	22.1	22.7	22.6	23.2	23.7
	8H	19.8	20.4	20.3	20.9	21.4	22.5	23.1	23.0	23.6	24.2

Maximum UGR = 24.3

POLAR GRAPH



Maximum Candela = 1996.383 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.)