



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L40-940-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-L40-940-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	3416
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
Total Luminaire Watts	32
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	1411	1568	1687
55	1284	1522	1701
65	1097	1512	1781
75	808	1588	1993
85	309	1275	1172

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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	1186.613	1186.613	1186.613	1186.613	1186.613
5	1197.990	1183.768	1176.374	1173.529	1173.529
10	1175.805	1161.015	1157.033	1157.602	1155.895
15	1140.536	1130.297	1128.590	1132.572	1134.848
20	1094.460	1085.358	1089.340	1100.148	1102.424
25	1034.162	1026.198	1040.419	1055.778	1059.191
30	964.763	963.056	982.397	1002.875	1010.839
35	883.418	890.244	918.686	944.853	954.524
40	797.522	810.037	853.838	883.987	895.364
45	694.561	716.177	771.924	821.982	830.515
50	608.665	635.401	690.010	738.931	753.152
55	512.530	539.266	607.528	659.861	679.202
60	418.102	447.682	520.494	583.636	601.839
65	322.536	363.493	444.838	506.273	523.907
70	233.227	279.303	363.493	428.910	443.131
75	145.625	201.940	286.130	344.721	358.942
80	69.968	130.835	207.629	234.933	226.970
85	18.772	64.848	77.363	68.830	71.106
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	431.43	N.A.	12.60
0-30	911.84	N.A.	26.70
0-40	1486.73	N.A.	43.50
0-60	2617.78	N.A.	76.60
0-80	3331.86	N.A.	97.50
0-90	3415.81	N.A.	100.00
10-90	3303.8	N.A.	96.70
20-40	1055.3	N.A.	30.90
20-50	1648.55	N.A.	48.30
40-70	1561.23	N.A.	45.70
60-80	714.09	N.A.	20.90
70-80	283.91	N.A.	8.30
80-90	83.95	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	3415.81	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	112.01
10-20	319.42
20-30	480.41
30-40	574.89
40-50	593.25
50-60	537.80
60-70	430.18
70-80	283.91
80-90	83.95
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

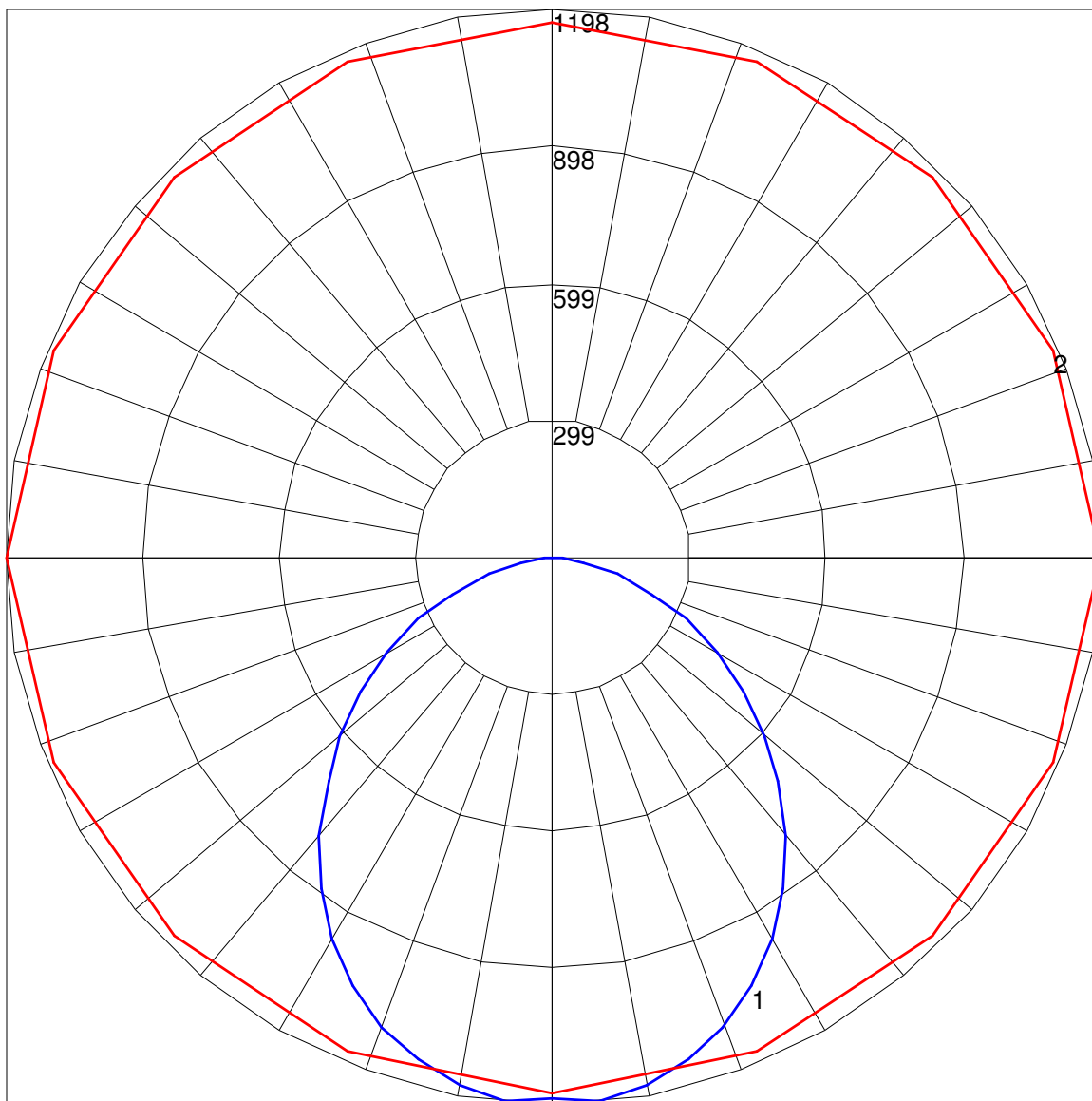
Reflectances

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	12.6	14.3	13.0	14.6	14.9	14.3	16.0	14.7	16.3	16.6
	3H	14.2	15.7	14.6	16.0	16.4	16.7	18.2	17.1	18.5	18.9
	4H	14.7	16.1	15.1	16.5	16.9	17.7	19.2	18.1	19.5	19.9
	6H	15.0	16.4	15.4	16.7	17.1	18.6	19.9	19.0	20.3	20.7
	8H	15.1	16.4	15.5	16.8	17.2	18.8	20.1	19.2	20.5	20.9
	12H	15.1	16.4	15.6	16.7	17.2	18.9	20.2	19.4	20.5	21.0
4H	2H	13.6	15.0	14.0	15.3	15.7	14.9	16.3	15.3	16.7	17.0
	3H	15.4	16.6	15.8	17.0	17.4	17.5	18.7	17.9	19.1	19.5
	4H	16.1	17.2	16.5	17.6	18.1	18.8	19.9	19.2	20.3	20.7
	6H	16.6	17.5	17.0	18.0	18.4	19.8	20.8	20.3	21.2	21.6
	8H	16.7	17.6	17.2	18.0	18.5	20.1	21.0	20.6	21.4	21.9
	12H	16.8	17.6	17.2	18.0	18.5	20.3	21.1	20.7	21.5	22.0
8H	4H	16.9	17.8	17.3	18.2	18.7	19.1	20.0	19.6	20.4	20.9
	6H	17.5	18.3	18.0	18.8	19.2	20.3	21.0	20.8	21.5	22.0
	8H	17.8	18.4	18.3	18.9	19.4	20.7	21.4	21.2	21.9	22.4
	12H	17.9	18.5	18.4	19.0	19.5	20.9	21.5	21.4	22.0	22.6
12H	4H	17.0	17.8	17.5	18.3	18.8	19.1	19.9	19.6	20.4	20.9
	6H	17.8	18.5	18.3	18.9	19.5	20.4	21.0	20.9	21.5	22.0
	8H	18.1	18.7	18.6	19.2	19.7	20.8	21.4	21.3	21.9	22.5

Maximum UGR = 22.6

POLAR GRAPH



Maximum Candela = 1197.99 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.)