



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L40-927-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-L40-927-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	3177
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
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	1313	1459	1570
55	1194	1416	1583
65	1020	1407	1657
75	752	1478	1854
85	288	1186	1090

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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	1103.826	1103.826	1103.826	1103.826	1103.826
5	1114.409	1101.180	1094.301	1091.655	1091.655
10	1093.772	1080.014	1076.309	1076.839	1075.251
15	1060.964	1051.439	1049.851	1053.556	1055.672
20	1018.102	1009.635	1013.340	1023.394	1025.510
25	962.011	954.603	967.832	982.119	985.294
30	897.454	895.866	913.858	932.907	940.316
35	821.784	828.134	854.592	878.933	887.929
40	741.881	753.522	794.268	822.313	832.896
45	646.103	666.211	718.069	764.635	772.572
50	566.200	591.071	641.870	687.378	700.607
55	476.772	501.643	565.142	613.824	631.816
60	388.932	416.448	484.180	542.917	559.850
65	300.033	338.133	413.802	470.952	487.355
70	216.955	259.817	338.133	398.986	412.215
75	135.465	187.851	266.167	320.670	333.899
80	65.087	121.707	193.143	218.543	211.134
85	17.462	60.324	71.966	64.028	66.145
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	401.33	N.A.	12.60
0-30	848.23	N.A.	26.70
0-40	1383.00	N.A.	43.50
0-60	2435.14	N.A.	76.60
0-80	3099.41	N.A.	97.50
0-90	3177.5	N.A.	100.00
10-90	3073.31	N.A.	96.70
20-40	981.68	N.A.	30.90
20-50	1533.53	N.A.	48.30
40-70	1452.3	N.A.	45.70
60-80	664.27	N.A.	20.90
70-80	264.10	N.A.	8.30
80-90	78.09	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	3177.5	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	104.19
10-20	297.14
20-30	446.90
30-40	534.78
40-50	551.86
50-60	500.28
60-70	400.17
70-80	264.10
80-90	78.09
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

X=2H	Y=2H	12.3	14.0	12.7	14.3	14.6	14.0	15.7	14.4	16.0	16.3
	3H	13.9	15.4	14.3	15.7	16.1	16.4	17.9	16.8	18.2	18.6
	4H	14.4	15.8	14.8	16.2	16.6	17.4	18.9	17.8	19.2	19.6
	6H	14.7	16.1	15.1	16.4	16.8	18.3	19.6	18.7	20.0	20.4
	8H	14.8	16.1	15.2	16.5	16.9	18.5	19.8	18.9	20.2	20.6
	12H	14.8	16.1	15.3	16.4	16.9	18.6	19.9	19.1	20.2	20.7

UGR Viewed Endwise

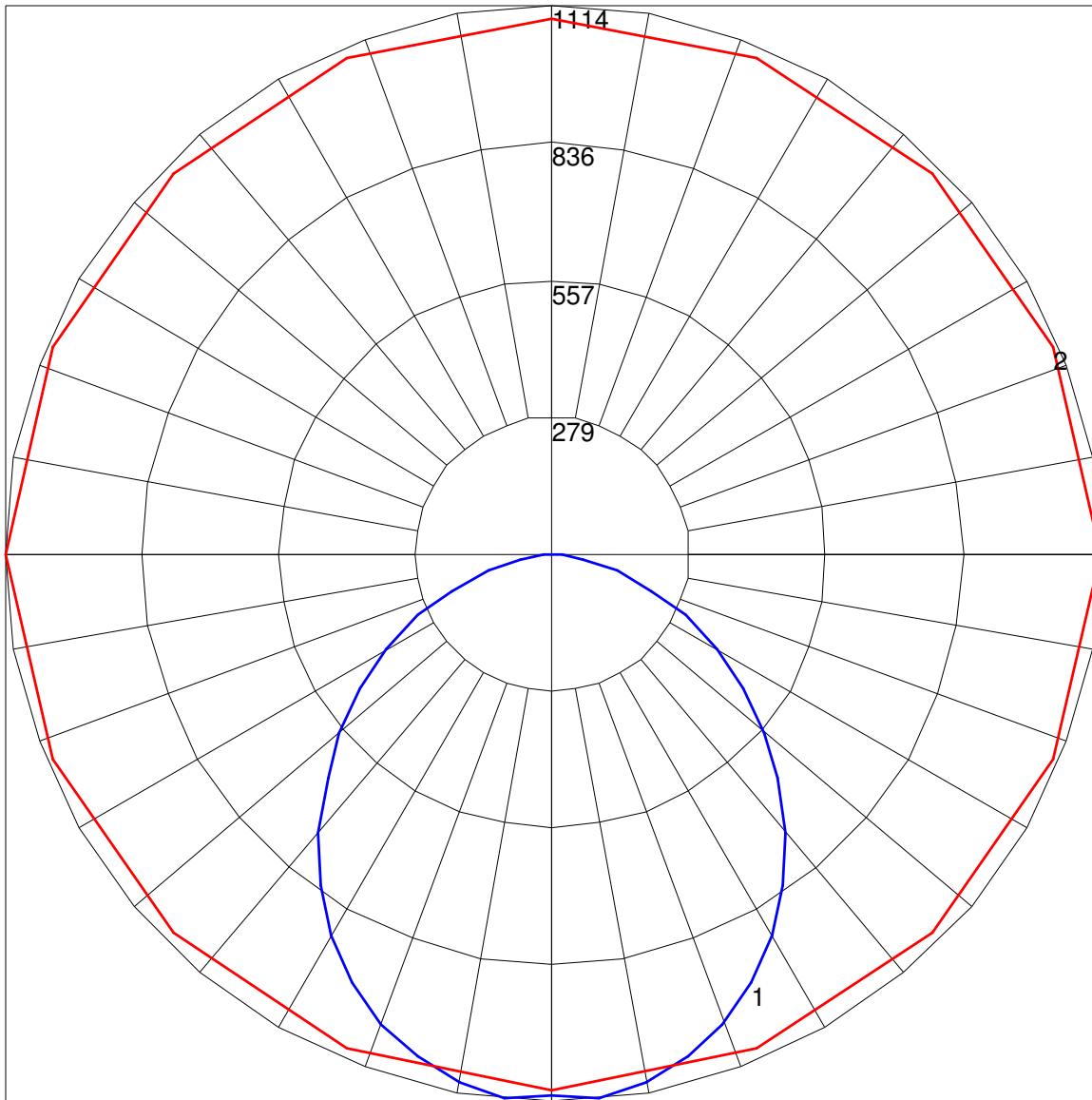
4H	2H	13.3	14.7	13.7	15.0	15.4	14.6	16.0	15.0	16.4	16.7
	3H	15.1	16.3	15.5	16.7	17.1	17.2	18.4	17.6	18.8	19.2
	4H	15.8	16.9	16.2	17.3	17.8	18.5	19.6	18.9	20.0	20.4
	6H	16.3	17.2	16.7	17.7	18.1	19.5	20.5	20.0	20.9	21.3
	8H	16.4	17.3	16.9	17.7	18.2	19.8	20.7	20.3	21.1	21.6
	12H	16.5	17.3	16.9	17.7	18.2	20.0	20.8	20.4	21.2	21.7

8H	4H	16.6	17.5	17.0	17.9	18.4	18.8	19.7	19.3	20.1	20.6
	6H	17.2	18.0	17.7	18.5	18.9	20.0	20.7	20.5	21.2	21.7
	8H	17.5	18.1	18.0	18.6	19.1	20.4	21.1	20.9	21.6	22.1
	12H	17.6	18.2	18.1	18.7	19.2	20.6	21.2	21.1	21.7	22.3

12H	4H	16.7	17.5	17.2	18.0	18.5	18.8	19.6	19.3	20.1	20.6
	6H	17.5	18.2	18.0	18.6	19.2	20.1	20.7	20.6	21.2	21.7
	8H	17.8	18.4	18.3	18.9	19.4	20.5	21.1	21.0	21.6	22.2

Maximum UGR = 22.3

POLAR GRAPH



Maximum Candela = 1114.409 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.)