



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L40-827-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-L40-827-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	3853
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
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	1592	1769	1903
55	1448	1716	1919
65	1237	1706	2009
75	912	1792	2247
85	349	1438	1322

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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	1338.389	1338.389	1338.389	1338.389	1338.389
5	1351.221	1335.181	1326.840	1323.632	1323.632
10	1326.198	1309.516	1305.025	1305.667	1303.742
15	1286.419	1274.870	1272.945	1277.436	1280.003
20	1234.449	1224.183	1228.674	1240.865	1243.431
25	1166.438	1157.456	1173.496	1190.819	1194.669
30	1088.163	1086.238	1108.052	1131.150	1140.133
35	996.413	1004.112	1036.193	1065.706	1076.614
40	899.531	913.646	963.050	997.055	1009.887
45	783.400	807.781	870.658	927.120	936.744
50	686.518	716.673	778.267	833.445	849.485
55	578.086	608.242	685.234	744.262	766.077
60	471.580	504.943	587.069	658.287	678.818
65	363.790	409.986	501.735	571.029	590.918
70	263.058	315.028	409.986	483.770	499.811
75	164.251	227.770	322.727	388.813	404.853
80	78.917	147.569	234.186	264.983	256.001
85	21.173	73.143	87.258	77.634	80.201
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	486.61	N.A.	12.60
0-30	1028.47	N.A.	26.70
0-40	1676.89	N.A.	43.50
0-60	2952.61	N.A.	76.60
0-80	3758.03	N.A.	97.50
0-90	3852.72	N.A.	100.00
10-90	3726.38	N.A.	96.70
20-40	1190.28	N.A.	30.90
20-50	1859.41	N.A.	48.30
40-70	1760.92	N.A.	45.70
60-80	805.42	N.A.	20.90
70-80	320.22	N.A.	8.30
80-90	94.69	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	3852.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	126.33
10-20	360.28
20-30	541.86
30-40	648.42
40-50	669.13
50-60	606.59
60-70	485.20
70-80	320.22
80-90	94.69
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

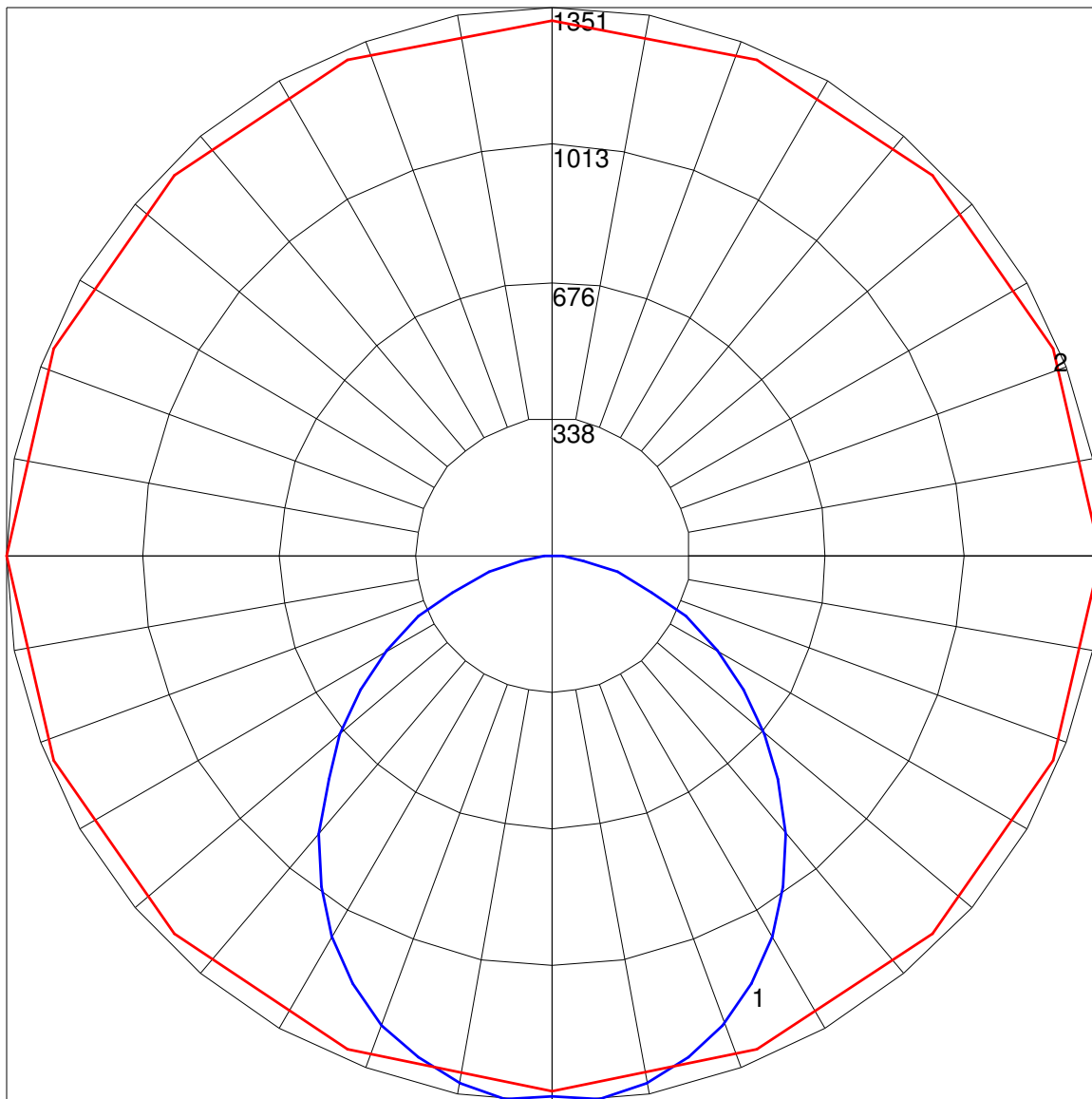
Reflectances

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	13.0	14.7	13.4	15.0	15.3	14.7	16.4	15.1	16.7	17.0
	3H	14.6	16.1	15.0	16.4	16.8	17.1	18.6	17.5	18.9	19.3
	4H	15.1	16.5	15.5	16.9	17.3	18.1	19.6	18.5	19.9	20.3
	6H	15.4	16.8	15.8	17.1	17.5	19.0	20.3	19.4	20.7	21.1
	8H	15.5	16.8	15.9	17.2	17.6	19.2	20.5	19.6	20.9	21.3
	12H	15.5	16.8	16.0	17.1	17.6	19.3	20.6	19.8	20.9	21.4
4H	2H	14.0	15.4	14.4	15.7	16.1	15.3	16.7	15.7	17.1	17.4
	3H	15.8	17.0	16.2	17.4	17.8	17.9	19.1	18.3	19.5	19.9
	4H	16.5	17.6	16.9	18.0	18.5	19.2	20.3	19.6	20.7	21.1
	6H	17.0	17.9	17.4	18.4	18.8	20.2	21.2	20.7	21.6	22.0
	8H	17.1	18.0	17.6	18.4	18.9	20.5	21.4	21.0	21.8	22.3
	12H	17.2	18.0	17.6	18.4	18.9	20.7	21.5	21.1	21.9	22.4
8H	4H	17.3	18.2	17.7	18.6	19.1	19.5	20.4	20.0	20.8	21.3
	6H	17.9	18.7	18.4	19.2	19.6	20.7	21.4	21.2	21.9	22.4
	8H	18.2	18.8	18.7	19.3	19.8	21.1	21.8	21.6	22.3	22.8
	12H	18.3	18.9	18.8	19.4	19.9	21.3	21.9	21.8	22.4	23.0
12H	4H	17.4	18.2	17.9	18.7	19.2	19.5	20.3	20.0	20.8	21.3
	6H	18.2	18.9	18.7	19.3	19.9	20.8	21.4	21.3	21.9	22.4
	8H	18.5	19.1	19.0	19.6	20.1	21.2	21.8	21.7	22.3	22.9

Maximum UGR = 23.0

POLAR GRAPH



Maximum Candela = 1351.221 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.)