



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L40-835-AF-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM BALLABS TEST NO. 18669.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 09-21-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2-22" LED ARRAYS 2x4'RECESSED LUMINAIRE
 [MORE] WHITE REFLECTOR w/CENTER FROSTED ACRYLIC LENS
 [MORE] ELECTRONIC LED DRIVER
 [LUMCAT] LT-24-L40-835-AF-DIM-UNV
 [LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3972
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	32
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.90 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1647	1863	2054
55	1427	1736	2010
65	1254	1742	2134
75	1028	1832	2321
85	887	2203	2020

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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	1413.258	1413.258	1413.258	1413.258	1413.258
5	1407.198	1408.299	1408.299	1408.850	1409.401
10	1385.709	1386.260	1390.668	1394.525	1396.729
15	1332.265	1335.570	1344.386	1353.753	1358.160
20	1281.024	1287.635	1305.818	1324.000	1331.163
25	1178.542	1188.459	1213.253	1237.496	1249.067
30	1053.470	1067.795	1102.507	1134.463	1149.891
35	974.129	992.862	1038.042	1081.019	1099.201
40	875.504	900.298	958.702	1013.799	1032.533
45	805.530	836.935	910.766	980.190	1004.433
50	681.009	714.618	793.408	866.688	895.890
55	565.854	602.219	688.722	766.410	797.265
60	452.904	492.023	580.180	661.173	687.620
65	366.400	408.826	509.104	596.158	623.707
70	273.285	318.465	424.804	508.002	533.347
75	184.027	231.962	327.832	394.500	415.437
80	112.950	163.640	242.981	293.671	301.936
85	53.445	94.217	132.786	134.439	121.766
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	514.58	N.A.	13.00
0-30	1071.73	N.A.	27.00
0-40	1719.34	N.A.	43.30
0-60	3020.18	N.A.	76.00
0-80	3848.88	N.A.	96.90
0-90	3971.79	N.A.	100.00
10-90	3837.92	N.A.	96.60
20-40	1204.77	N.A.	30.30
20-50	1893.38	N.A.	47.70
40-70	1794.87	N.A.	45.20
60-80	828.70	N.A.	20.90
70-80	334.67	N.A.	8.40
80-90	122.91	N.A.	3.10
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	3971.79	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	133.87
10-20	380.71
20-30	557.16
30-40	647.61
40-50	688.62
50-60	612.22
60-70	494.03
70-80	334.67
80-90	122.91
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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	72	77	74	70	68
3	89	78	70	63	87	77	69	62	74	67	61	71	65	60	68	63	59	57
4	82	69	60	53	79	68	59	53	65	58	52	63	57	51	61	55	51	48
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	39	51	44	39	50	43	39	37
7	64	50	42	35	62	50	41	35	48	40	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

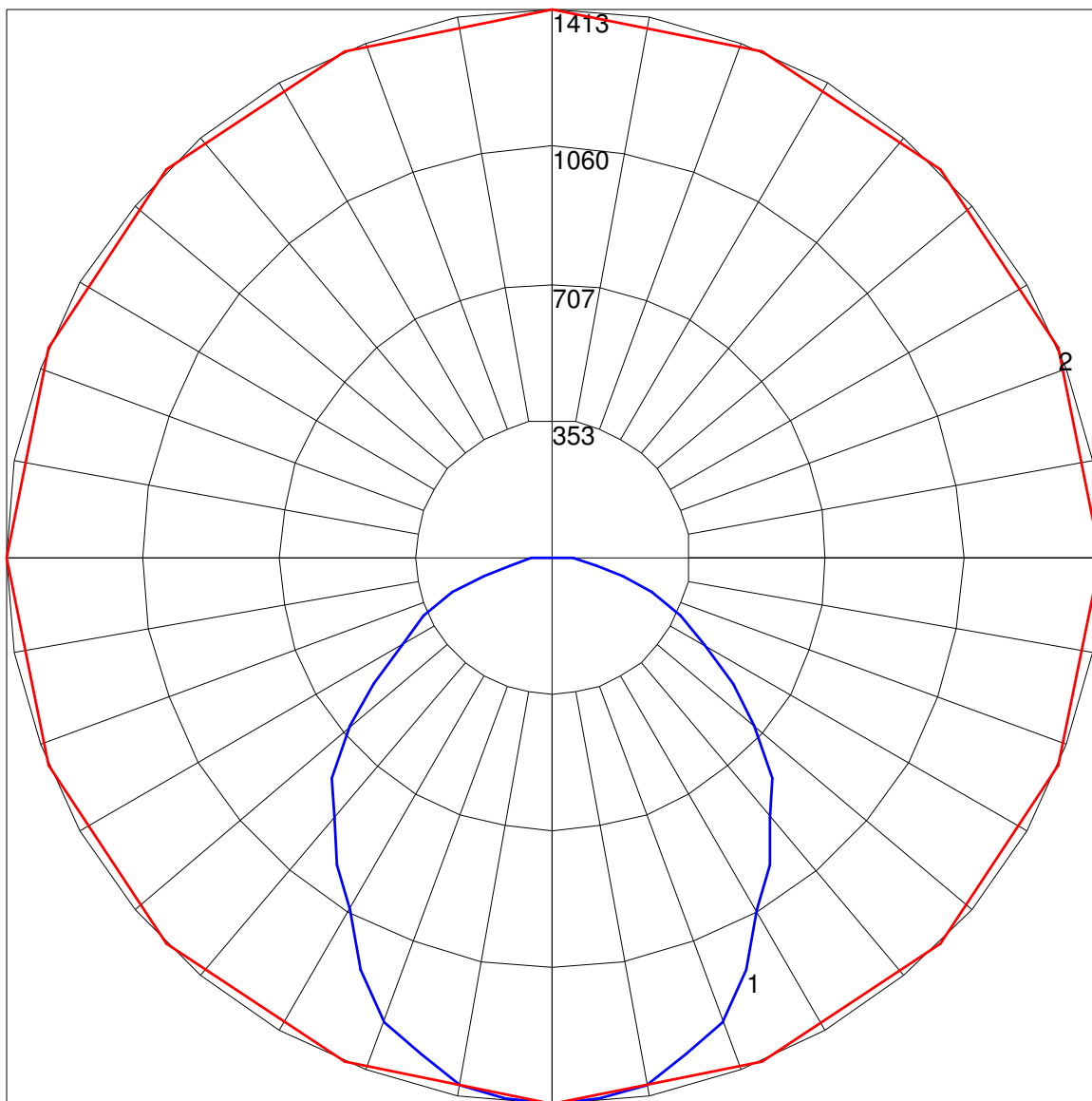
Reflectances

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	12.8	14.4	13.1	14.7	15.1	14.8	16.4	15.1	16.7	17.1
	3H	14.5	16.0	14.8	16.3	16.7	17.3	18.8	17.6	19.1	19.4
	4H	15.1	16.5	15.5	16.8	17.2	18.3	19.7	18.7	20.1	20.4
	6H	15.5	16.9	16.0	17.2	17.6	19.2	20.6	19.6	20.9	21.3
	8H	15.7	17.0	16.1	17.4	17.8	19.6	20.8	20.0	21.2	21.6
	12H	15.8	17.0	16.2	17.4	17.9	19.8	21.0	20.2	21.4	21.8
4H	2H	13.8	15.2	14.2	15.6	16.0	15.3	16.7	15.7	17.1	17.5
	3H	15.8	17.0	16.2	17.4	17.8	18.1	19.3	18.5	19.7	20.1
	4H	16.5	17.6	16.9	18.0	18.4	19.3	20.4	19.7	20.8	21.2
	6H	17.1	18.1	17.5	18.5	19.0	20.4	21.4	20.9	21.8	22.3
	8H	17.3	18.2	17.8	18.7	19.1	20.9	21.8	21.3	22.2	22.7
	12H	17.5	18.3	18.0	18.8	19.3	21.2	22.0	21.6	22.4	22.9
8H	4H	17.2	18.2	17.7	18.6	19.1	19.6	20.5	20.1	21.0	21.4
	6H	18.1	18.8	18.6	19.3	19.8	20.9	21.7	21.4	22.2	22.7
	8H	18.4	19.1	18.9	19.6	20.1	21.5	22.2	22.0	22.7	23.2
	12H	18.7	19.3	19.2	19.8	20.3	21.9	22.5	22.4	23.0	23.5
12H	4H	17.4	18.3	17.9	18.7	19.2	19.6	20.5	20.1	20.9	21.4
	6H	18.4	19.1	18.9	19.5	20.0	21.0	21.7	21.6	22.2	22.7
	8H	18.8	19.4	19.3	19.9	20.4	21.6	22.3	22.2	22.7	23.3

Maximum UGR = 23.5

POLAR GRAPH



Maximum Candela = 1413.258 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)