



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L64-927-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-L64-927-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	5117
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
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	2114	2349	2528
55	1923	2280	2548
65	1642	2265	2668
75	1211	2379	2985
85	464	1910	1756

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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	1777.459	1777.459	1777.459	1777.459	1777.459
5	1794.501	1773.199	1762.122	1757.861	1757.861
10	1761.270	1739.115	1733.151	1734.003	1731.447
15	1708.440	1693.103	1690.546	1696.511	1699.919
20	1639.421	1625.787	1631.752	1647.942	1651.350
25	1549.099	1537.170	1558.472	1581.479	1586.591
30	1445.144	1442.588	1471.559	1502.234	1514.164
35	1323.296	1333.521	1376.125	1415.321	1429.807
40	1194.630	1213.376	1278.987	1324.148	1341.189
45	1040.402	1072.781	1156.286	1231.270	1244.051
50	911.736	951.784	1033.585	1106.865	1128.167
55	767.733	807.781	910.032	988.424	1017.395
60	626.286	670.595	779.662	874.244	901.511
65	483.135	544.485	666.334	758.360	784.775
70	349.357	418.376	544.485	642.476	663.778
75	218.135	302.492	428.601	516.366	537.669
80	104.807	195.981	311.013	351.913	339.984
85	28.119	97.138	115.884	103.103	106.511
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	646.25	N.A.	12.60
0-30	1365.87	N.A.	26.70
0-40	2227.01	N.A.	43.50
0-60	3921.24	N.A.	76.60
0-80	4990.89	N.A.	97.50
0-90	5116.64	N.A.	100.00
10-90	4948.86	N.A.	96.70
20-40	1580.76	N.A.	30.90
20-50	2469.41	N.A.	48.30
40-70	2338.6	N.A.	45.70
60-80	1069.65	N.A.	20.90
70-80	425.27	N.A.	8.30
80-90	125.75	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	5116.64	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	167.78
10-20	478.47
20-30	719.63
30-40	861.14
40-50	888.64
50-60	805.59
60-70	644.38
70-80	425.27
80-90	125.75
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

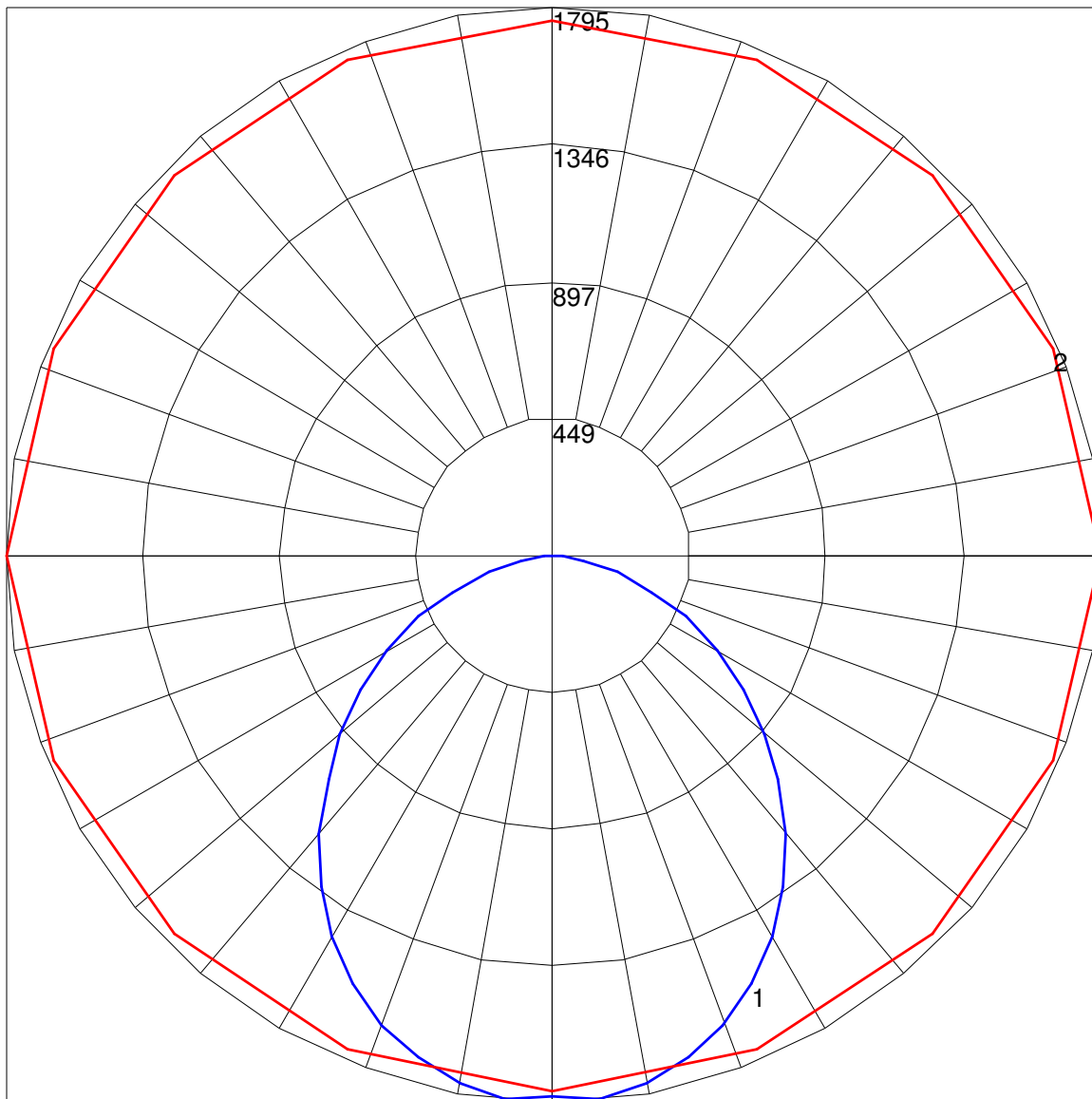
Reflectances

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	14.0	15.7	14.4	16.0	16.3	15.7	17.4	16.1	17.7	18.0
	3H	15.6	17.1	16.0	17.4	17.8	18.1	19.6	18.5	19.9	20.3
	4H	16.1	17.5	16.5	17.9	18.3	19.1	20.6	19.5	20.9	21.3
	6H	16.4	17.8	16.8	18.1	18.5	20.0	21.3	20.4	21.7	22.1
	8H	16.5	17.8	16.9	18.2	18.6	20.2	21.5	20.6	21.9	22.3
	12H	16.5	17.8	17.0	18.1	18.6	20.3	21.6	20.8	21.9	22.4
4H	2H	15.0	16.4	15.4	16.7	17.1	16.3	17.7	16.7	18.1	18.4
	3H	16.8	18.0	17.2	18.4	18.8	18.9	20.1	19.3	20.5	20.9
	4H	17.5	18.6	17.9	19.0	19.5	20.2	21.3	20.6	21.7	22.1
	6H	18.0	18.9	18.4	19.4	19.8	21.2	22.2	21.7	22.6	23.0
	8H	18.1	19.0	18.6	19.4	19.9	21.5	22.4	22.0	22.8	23.3
	12H	18.2	19.0	18.6	19.4	19.9	21.7	22.5	22.1	22.9	23.4
8H	4H	18.3	19.2	18.7	19.6	20.1	20.5	21.4	21.0	21.8	22.3
	6H	18.9	19.7	19.4	20.2	20.6	21.7	22.4	22.2	22.9	23.4
	8H	19.2	19.8	19.7	20.3	20.8	22.1	22.8	22.6	23.3	23.8
	12H	19.3	19.9	19.8	20.4	20.9	22.3	22.9	22.8	23.4	24.0
12H	4H	18.4	19.2	18.9	19.7	20.2	20.5	21.3	21.0	21.8	22.3
	6H	19.2	19.9	19.7	20.3	20.9	21.8	22.4	22.3	22.9	23.4
	8H	19.5	20.1	20.0	20.6	21.1	22.2	22.8	22.7	23.3	23.9

Maximum UGR = 24.0

POLAR GRAPH



Maximum Candela = 1794.501 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.)