



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L82-935-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-L82-935-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	6817
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	64.3
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	2817	3130	3368
55	2562	3037	3396
65	2188	3018	3555
75	1613	3170	3977
85	618	2545	2339

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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	2368.286	2368.286	2368.286	2368.286	2368.286
5	2390.992	2362.609	2347.850	2342.173	2342.173
10	2346.715	2317.196	2309.249	2310.384	2306.978
15	2276.325	2255.889	2252.483	2260.430	2264.971
20	2184.363	2166.198	2174.145	2195.717	2200.258
25	2064.019	2048.124	2076.508	2107.161	2113.973
30	1925.510	1922.104	1960.705	2001.576	2017.471
35	1763.158	1776.782	1833.548	1885.773	1905.074
40	1591.724	1616.701	1704.121	1764.293	1787.000
45	1386.231	1429.373	1540.635	1640.543	1657.573
50	1214.797	1268.157	1377.148	1474.786	1503.169
55	1022.927	1076.287	1212.526	1316.976	1355.577
60	834.463	893.500	1038.821	1164.842	1201.173
65	643.729	725.472	887.823	1010.438	1045.633
70	465.483	557.444	725.472	856.034	884.417
75	290.643	403.040	571.068	688.006	716.389
80	139.645	261.125	414.393	468.889	452.994
85	37.466	129.427	154.404	137.374	141.916
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	861.06	N.A.	12.60
0-30	1819.89	N.A.	26.70
0-40	2967.27	N.A.	43.50
0-60	5224.66	N.A.	76.60
0-80	6649.86	N.A.	97.50
0-90	6817.41	N.A.	100.00
10-90	6593.86	N.A.	96.70
20-40	2106.21	N.A.	30.90
20-50	3290.23	N.A.	48.30
40-70	3115.96	N.A.	45.70
60-80	1425.2	N.A.	20.90
70-80	566.63	N.A.	8.30
80-90	167.55	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	6817.41	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	223.55
10-20	637.51
20-30	958.83
30-40	1147.38
40-50	1184.03
50-60	1073.37
60-70	858.57
70-80	566.63
80-90	167.55
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	71	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

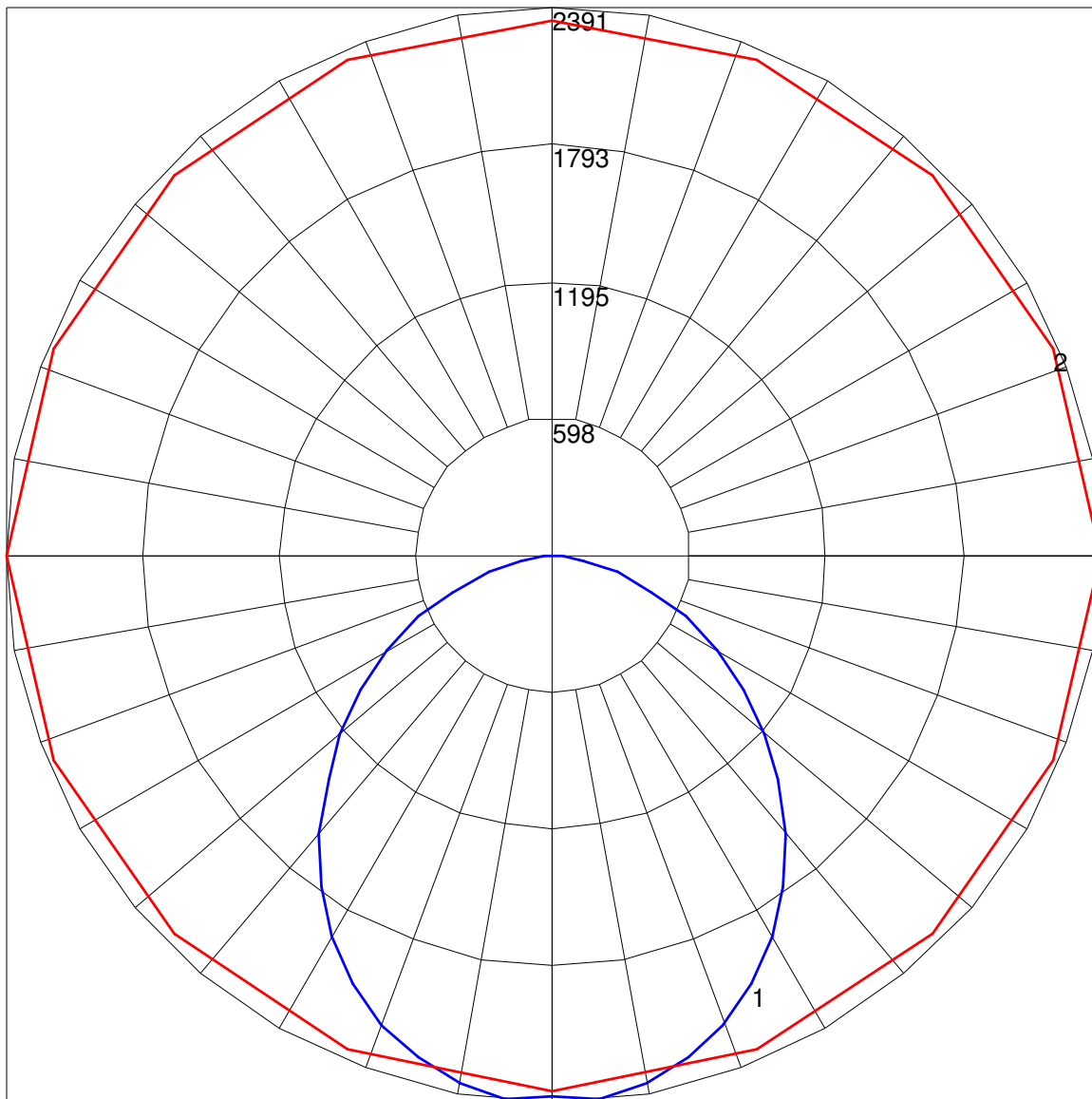
Reflectances

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	15.0	16.7	15.4	17.0	17.3	16.7	18.4	17.1	18.7	19.0
	3H	16.6	18.1	17.0	18.4	18.8	19.1	20.6	19.5	20.9	21.3
	4H	17.1	18.5	17.5	18.9	19.3	20.1	21.6	20.5	21.9	22.3
	6H	17.4	18.8	17.8	19.1	19.5	21.0	22.3	21.4	22.7	23.1
	8H	17.5	18.8	17.9	19.2	19.6	21.2	22.5	21.6	22.9	23.3
	12H	17.5	18.8	18.0	19.1	19.6	21.3	22.6	21.8	22.9	23.4
4H	2H	16.0	17.4	16.4	17.7	18.1	17.3	18.7	17.7	19.1	19.4
	3H	17.8	19.0	18.2	19.4	19.8	19.9	21.1	20.3	21.5	21.9
	4H	18.5	19.6	18.9	20.0	20.5	21.2	22.3	21.6	22.7	23.1
	6H	19.0	19.9	19.4	20.4	20.8	22.2	23.2	22.7	23.6	24.0
	8H	19.1	20.0	19.6	20.4	20.9	22.5	23.4	23.0	23.8	24.3
	12H	19.2	20.0	19.6	20.4	20.9	22.7	23.5	23.1	23.9	24.4
8H	4H	19.3	20.2	19.7	20.6	21.1	21.5	22.4	22.0	22.8	23.3
	6H	19.9	20.7	20.4	21.2	21.6	22.7	23.4	23.2	23.9	24.4
	8H	20.2	20.8	20.7	21.3	21.8	23.1	23.8	23.6	24.3	24.8
	12H	20.3	20.9	20.8	21.4	21.9	23.3	23.9	23.8	24.4	25.0
12H	4H	19.4	20.2	19.9	20.7	21.2	21.5	22.3	22.0	22.8	23.3
	6H	20.2	20.9	20.7	21.3	21.9	22.8	23.4	23.3	23.9	24.4
	8H	20.5	21.1	21.0	21.6	22.1	23.2	23.8	23.7	24.3	24.9

Maximum UGR = 25.0

POLAR GRAPH



Maximum Candela = 2390.992 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.)