



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L52-840-AF-(L46)-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] 10-19-2023
 [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-L52-840-AF-(L46)-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	4458
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
Total Luminaire Watts	31.6
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	1842	2047	2202
55	1675	1986	2220
65	1431	1974	2324
75	1055	2073	2600
85	404	1664	1530

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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	1548.607	1548.607	1548.607	1548.607	1548.607
5	1563.455	1544.895	1535.244	1531.533	1531.533
10	1534.502	1515.200	1510.004	1510.746	1508.519
15	1488.474	1475.112	1472.884	1478.081	1481.051
20	1428.342	1416.463	1421.660	1435.765	1438.735
25	1349.649	1339.256	1357.815	1377.860	1382.314
30	1259.079	1256.851	1282.092	1308.818	1319.212
35	1152.918	1161.827	1198.946	1233.095	1245.716
40	1040.819	1057.151	1114.314	1153.661	1168.508
45	906.448	934.658	1007.411	1072.741	1083.877
50	794.348	829.240	900.508	964.353	982.913
55	668.886	703.777	792.863	861.162	886.403
60	545.650	584.254	679.279	761.683	785.439
65	420.930	474.382	580.542	660.719	683.733
70	304.376	364.509	474.382	559.755	578.315
75	190.050	263.545	373.418	449.883	468.443
80	91.313	170.748	270.969	306.603	296.210
85	24.499	84.631	100.964	89.828	92.798
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	563.04	N.A.	12.60
0-30	1190.01	N.A.	26.70
0-40	1940.28	N.A.	43.50
0-60	3416.37	N.A.	76.60
0-80	4348.3	N.A.	97.50
0-90	4457.86	N.A.	100.00
10-90	4311.68	N.A.	96.70
20-40	1377.24	N.A.	30.90
20-50	2151.46	N.A.	48.30
40-70	2037.5	N.A.	45.70
60-80	931.93	N.A.	20.90
70-80	370.52	N.A.	8.30
80-90	109.56	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	4457.86	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	146.18
10-20	416.86
20-30	626.97
30-40	750.26
40-50	774.23
50-60	701.87
60-70	561.41
70-80	370.52
80-90	109.56
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	13.5	15.2	13.9	15.5	15.8	15.2	16.9	15.6	17.2	17.5
	3H	15.1	16.6	15.5	16.9	17.3	17.6	19.1	18.0	19.4	19.8
	4H	15.6	17.0	16.0	17.4	17.8	18.6	20.1	19.0	20.4	20.8
	6H	15.9	17.3	16.3	17.6	18.0	19.5	20.8	19.9	21.2	21.6
	8H	16.0	17.3	16.4	17.7	18.1	19.7	21.0	20.1	21.4	21.8
	12H	16.0	17.3	16.5	17.6	18.1	19.8	21.1	20.3	21.4	21.9

UGR Viewed Endwise

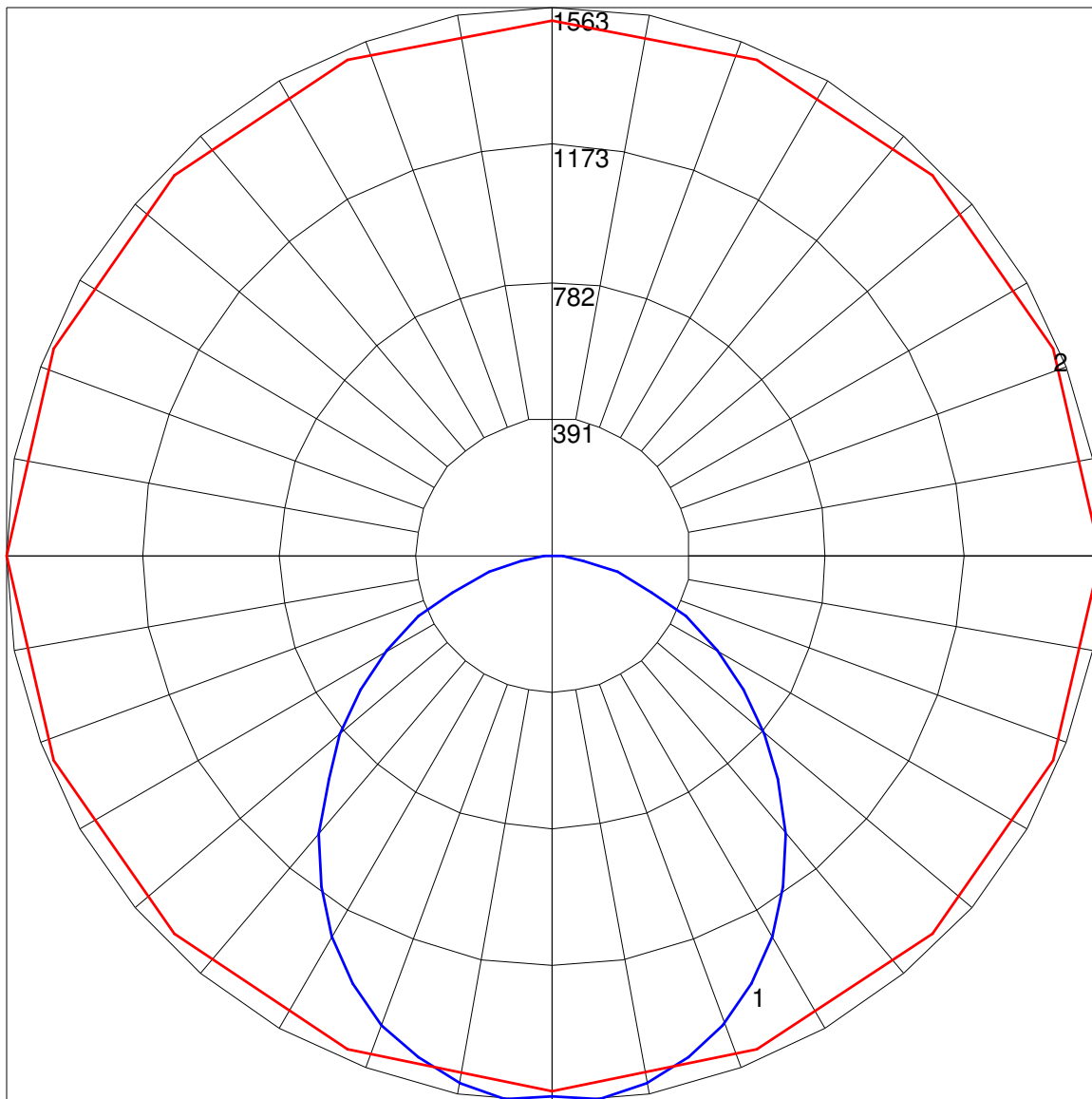
4H	2H	14.5	15.9	14.9	16.2	16.6	15.8	17.2	16.2	17.6	17.9
	3H	16.3	17.5	16.7	17.9	18.3	18.4	19.6	18.8	20.0	20.4
	4H	17.0	18.1	17.4	18.5	19.0	19.7	20.8	20.1	21.2	21.6
	6H	17.5	18.4	17.9	18.9	19.3	20.7	21.7	21.2	22.1	22.5
	8H	17.6	18.5	18.1	18.9	19.4	21.0	21.9	21.5	22.3	22.8
	12H	17.7	18.5	18.1	18.9	19.4	21.2	22.0	21.6	22.4	22.9

8H	4H	17.8	18.7	18.2	19.1	19.6	20.0	20.9	20.5	21.3	21.8
	6H	18.4	19.2	18.9	19.7	20.1	21.2	21.9	21.7	22.4	22.9
	8H	18.7	19.3	19.2	19.8	20.3	21.6	22.3	22.1	22.8	23.3
	12H	18.8	19.4	19.3	19.9	20.4	21.8	22.4	22.3	22.9	23.5

12H	4H	17.9	18.7	18.4	19.2	19.7	20.0	20.8	20.5	21.3	21.8
	6H	18.7	19.4	19.2	19.8	20.4	21.3	21.9	21.8	22.4	22.9
	8H	19.0	19.6	19.5	20.1	20.6	21.7	22.3	22.2	22.8	23.4

Maximum UGR = 23.5

POLAR GRAPH



Maximum Candela = 1563.455 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.)