



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L49-840-AF-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20203.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 2023-07-21
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2x2 RECESSED LED LUMINAIRE
 [MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CENTER LENS
 [MORE] 0-10V DIMMING DRIVER
 [LUMCAT] LT-22-L49-840-AF-DIM-UNV
 [LAMPCAT] 22 INCH LED ARRAY
 [_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	5015
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
Total Luminaire Watts	38.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.40
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4336	4658	5015
55	3931	4583	5170
65	3464	4538	5603
75	2665	4811	6549
85	1158	3909	3813

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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	1668.816	1668.816	1668.816	1668.816	1668.816
5	1667.378	1660.191	1658.754	1653.004	1657.316
10	1638.630	1631.443	1637.193	1631.443	1635.755
15	1595.508	1592.634	1601.258	1604.133	1608.445
20	1526.513	1536.575	1549.512	1563.886	1566.761
25	1447.457	1467.580	1486.266	1509.265	1515.014
30	1362.650	1385.649	1412.959	1447.457	1458.956
35	1269.220	1289.343	1322.403	1374.150	1385.649
40	1162.853	1182.976	1228.973	1283.594	1302.280
45	1047.861	1066.547	1125.480	1182.976	1211.724
50	912.746	937.182	1011.926	1070.859	1112.544
55	770.444	804.941	898.372	963.055	1013.363
60	635.329	674.138	781.943	863.874	912.746
65	500.213	541.898	655.452	766.132	809.253
70	367.973	412.532	539.023	659.764	704.324
75	235.733	290.354	425.469	544.773	579.270
80	116.429	182.549	293.229	401.033	389.534
85	34.497	70.432	116.429	196.923	113.554
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	608.97	N.A.	12.10
0-30	1294.34	N.A.	25.80
0-40	2125.38	N.A.	42.40
0-60	3790.34	N.A.	75.60
0-80	4875.67	N.A.	97.20
0-90	5014.86	N.A.	100.00
10-90	4857.28	N.A.	96.90
20-40	1516.41	N.A.	30.20
20-50	2384.33	N.A.	47.50
40-70	2313.8	N.A.	46.10
60-80	1085.33	N.A.	21.60
70-80	436.49	N.A.	8.70
80-90	139.19	N.A.	2.80
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	5014.86	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	157.58
10-20	451.39
20-30	685.38
30-40	831.04
40-50	867.92
50-60	797.04
60-70	648.84
70-80	436.49
80-90	139.19
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	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	62	56	51	60	55	50	48
5	75	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	45	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	38	34	32
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	39	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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UGR TABLE - CORRECTED

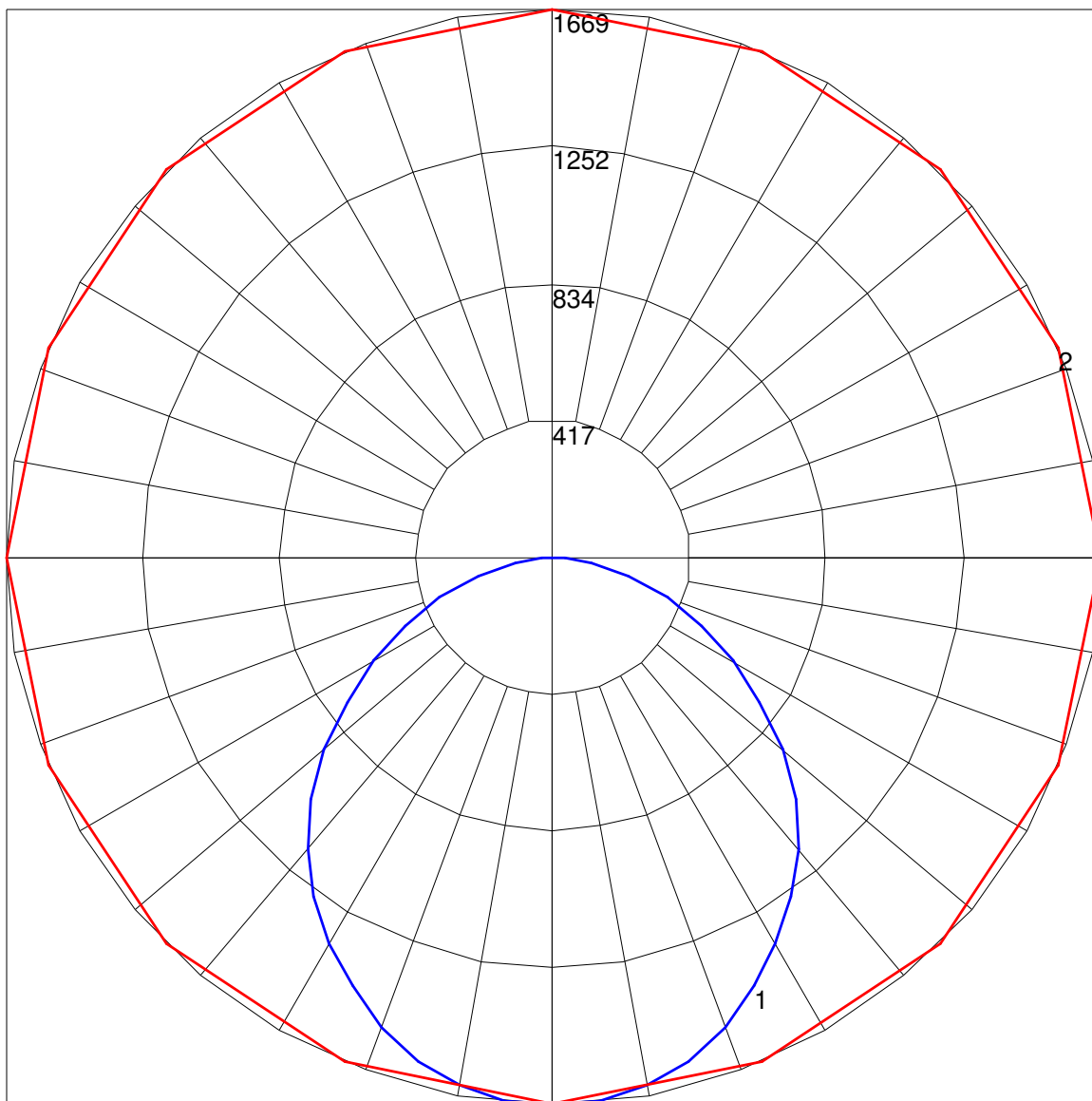
Reflectances

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	16.5	18.2	16.9	18.5	18.8	18.1	19.8	18.5	20.1	20.4
	3H	18.1	19.7	18.5	20.0	20.3	20.7	22.2	21.0	22.5	22.9
	4H	18.7	20.1	19.1	20.5	20.9	21.8	23.3	22.2	23.6	24.0
	6H	19.0	20.4	19.4	20.7	21.1	22.8	24.1	23.2	24.5	24.9
	8H	19.1	20.4	19.5	20.8	21.2	23.1	24.4	23.5	24.8	25.2
	12H	19.1	20.4	19.6	20.7	21.2	23.2	24.5	23.7	24.9	25.3
4H	2H	17.4	18.9	17.8	19.2	19.6	18.7	20.1	19.1	20.5	20.8
	3H	19.3	20.5	19.7	20.9	21.3	21.5	22.7	21.9	23.1	23.5
	4H	20.0	21.1	20.4	21.5	22.0	22.8	24.0	23.3	24.4	24.8
	6H	20.5	21.4	20.9	21.9	22.3	24.0	25.0	24.5	25.5	25.9
	8H	20.6	21.5	21.0	21.9	22.4	24.4	25.3	24.9	25.8	26.2
	12H	20.6	21.5	21.1	21.9	22.4	24.6	25.5	25.1	25.9	26.4
8H	4H	20.7	21.6	21.2	22.1	22.6	23.1	24.1	23.6	24.5	25.0
	6H	21.4	22.1	21.9	22.6	23.1	24.5	25.3	25.0	25.8	26.3
	8H	21.6	22.3	22.1	22.8	23.2	25.1	25.8	25.6	26.3	26.7
	12H	21.7	22.3	22.2	22.8	23.3	25.4	26.0	25.9	26.5	27.1
12H	4H	20.9	21.7	21.4	22.2	22.7	23.2	24.0	23.6	24.5	24.9
	6H	21.6	22.3	22.2	22.8	23.3	24.6	25.3	25.1	25.7	26.3
	8H	21.9	22.5	22.4	23.0	23.6	25.2	25.8	25.7	26.3	26.8

Maximum UGR = 27.1

POLAR GRAPH



Maximum Candela = 1668.816 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.)