



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L49-830-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-L49-830-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	4820
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	127
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	4168	4477	4820
55	3778	4405	4969
65	3329	4362	5386
75	2562	4624	6295
85	1113	3757	3665

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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	1604.007	1604.007	1604.007	1604.007	1604.007
5	1602.626	1595.718	1594.336	1588.810	1592.955
10	1574.994	1568.087	1573.613	1568.087	1572.231
15	1533.547	1530.784	1539.073	1541.837	1545.981
20	1467.232	1476.903	1489.337	1503.153	1505.916
25	1391.245	1410.587	1428.548	1450.653	1456.179
30	1309.732	1331.837	1358.087	1391.245	1402.298
35	1219.930	1239.272	1271.048	1320.785	1331.837
40	1117.693	1137.035	1181.246	1233.746	1251.706
45	1007.167	1025.128	1081.772	1137.035	1164.667
50	877.300	900.786	972.628	1029.273	1069.338
55	740.524	773.681	863.484	925.655	974.010
60	610.656	647.958	751.576	830.326	877.300
65	480.788	520.853	629.998	736.379	777.826
70	353.683	396.512	518.090	634.142	676.971
75	226.578	279.078	408.946	523.617	556.774
80	111.907	175.460	281.841	385.459	374.407
85	33.158	67.697	111.907	189.276	109.144
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	585.32	N.A.	12.10
0-30	1244.08	N.A.	25.80
0-40	2042.84	N.A.	42.40
0-60	3643.15	N.A.	75.60
0-80	4686.33	N.A.	97.20
0-90	4820.11	N.A.	100.00
10-90	4668.65	N.A.	96.90
20-40	1457.52	N.A.	30.20
20-50	2291.74	N.A.	47.50
40-70	2223.94	N.A.	46.10
60-80	1043.18	N.A.	21.60
70-80	419.54	N.A.	8.70
80-90	133.78	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	4820.11	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	151.46
10-20	433.86
20-30	658.76
30-40	798.76
40-50	834.22
50-60	766.09
60-70	623.64
70-80	419.54
80-90	133.78
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

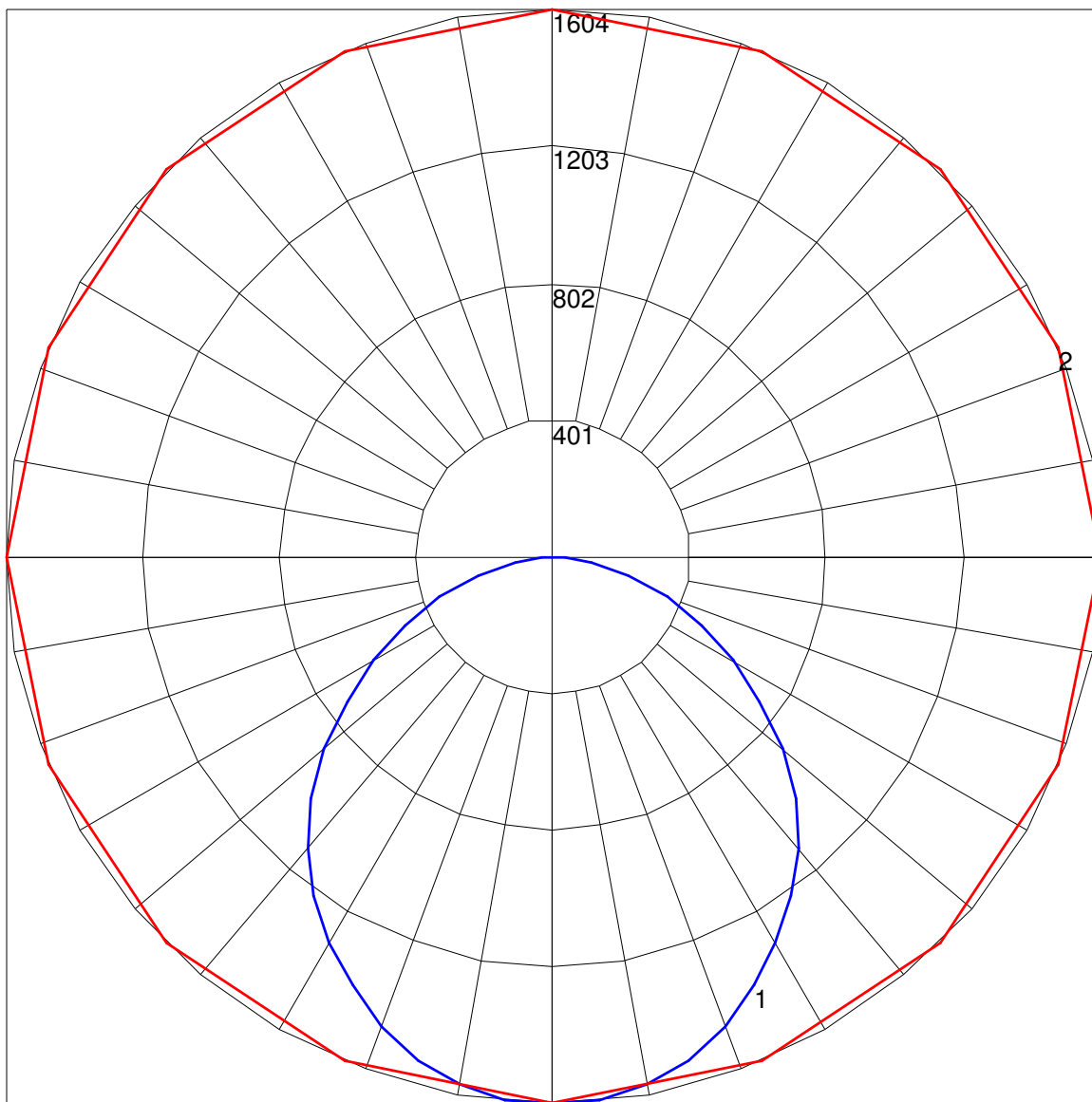
Reflectances

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	16.4	18.1	16.8	18.4	18.7	18.0	19.7	18.4	20.0	20.3
	3H	18.0	19.6	18.4	19.9	20.2	20.6	22.1	20.9	22.4	22.8
	4H	18.6	20.0	19.0	20.4	20.8	21.7	23.2	22.1	23.5	23.9
	6H	18.9	20.3	19.3	20.6	21.0	22.7	24.0	23.1	24.4	24.8
	8H	19.0	20.3	19.4	20.7	21.1	23.0	24.3	23.4	24.7	25.1
	12H	19.0	20.3	19.5	20.6	21.1	23.1	24.4	23.6	24.8	25.2
4H	2H	17.3	18.8	17.7	19.1	19.5	18.6	20.0	19.0	20.4	20.7
	3H	19.2	20.4	19.6	20.8	21.2	21.4	22.6	21.8	23.0	23.4
	4H	19.9	21.0	20.3	21.4	21.9	22.7	23.9	23.2	24.3	24.7
	6H	20.4	21.3	20.8	21.8	22.2	23.9	24.9	24.4	25.4	25.8
	8H	20.5	21.4	20.9	21.8	22.3	24.3	25.2	24.8	25.7	26.1
	12H	20.5	21.4	21.0	21.8	22.3	24.5	25.4	25.0	25.8	26.3
8H	4H	20.6	21.5	21.1	22.0	22.5	23.0	24.0	23.5	24.4	24.9
	6H	21.3	22.0	21.8	22.5	23.0	24.4	25.2	24.9	25.7	26.2
	8H	21.5	22.2	22.0	22.7	23.1	25.0	25.7	25.5	26.2	26.6
	12H	21.6	22.2	22.1	22.7	23.2	25.3	25.9	25.8	26.4	27.0
12H	4H	20.8	21.6	21.3	22.1	22.6	23.1	23.9	23.5	24.4	24.8
	6H	21.5	22.2	22.1	22.7	23.2	24.5	25.2	25.0	25.6	26.2
	8H	21.8	22.4	22.3	22.9	23.5	25.1	25.7	25.6	26.2	26.7

Maximum UGR = 27.0

POLAR GRAPH



Maximum Candela = 1604.007 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.)