



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L49-927-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-L49-927-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	3895
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
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	3368	3618	3895
55	3053	3560	4016
65	2690	3525	4352
75	2070	3736	5087
85	900	3036	2961

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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	1296.167	1296.167	1296.167	1296.167	1296.167
5	1295.051	1289.469	1288.352	1283.886	1287.236
10	1272.722	1267.140	1271.606	1267.140	1270.489
15	1239.230	1236.997	1243.695	1245.928	1249.277
20	1185.641	1193.456	1203.504	1214.668	1216.901
25	1124.238	1139.868	1154.381	1172.244	1176.710
30	1058.369	1076.232	1097.444	1124.238	1133.169
35	985.802	1001.431	1027.109	1067.300	1076.232
40	903.186	918.816	954.542	996.966	1011.479
45	813.872	828.386	874.159	918.816	941.145
50	708.929	727.908	785.962	831.735	864.111
55	598.403	625.197	697.764	748.003	787.078
60	493.459	523.602	607.334	670.970	708.929
65	388.515	420.891	509.089	595.053	628.546
70	285.804	320.413	418.659	512.438	547.047
75	183.093	225.517	330.461	423.124	449.918
80	90.430	141.786	227.750	311.482	302.551
85	26.794	54.705	90.430	152.950	88.197
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	472.98	N.A.	12.10
0-30	1005.32	N.A.	25.80
0-40	1650.78	N.A.	42.40
0-60	2943.95	N.A.	75.60
0-80	3786.93	N.A.	97.20
0-90	3895.03	N.A.	100.00
10-90	3772.64	N.A.	96.90
20-40	1177.8	N.A.	30.20
20-50	1851.91	N.A.	47.50
40-70	1797.13	N.A.	46.10
60-80	842.97	N.A.	21.60
70-80	339.02	N.A.	8.70
80-90	108.11	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	3895.03	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	122.39
10-20	350.60
20-30	532.33
30-40	645.46
40-50	674.11
50-60	619.06
60-70	503.95
70-80	339.02
80-90	108.11
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

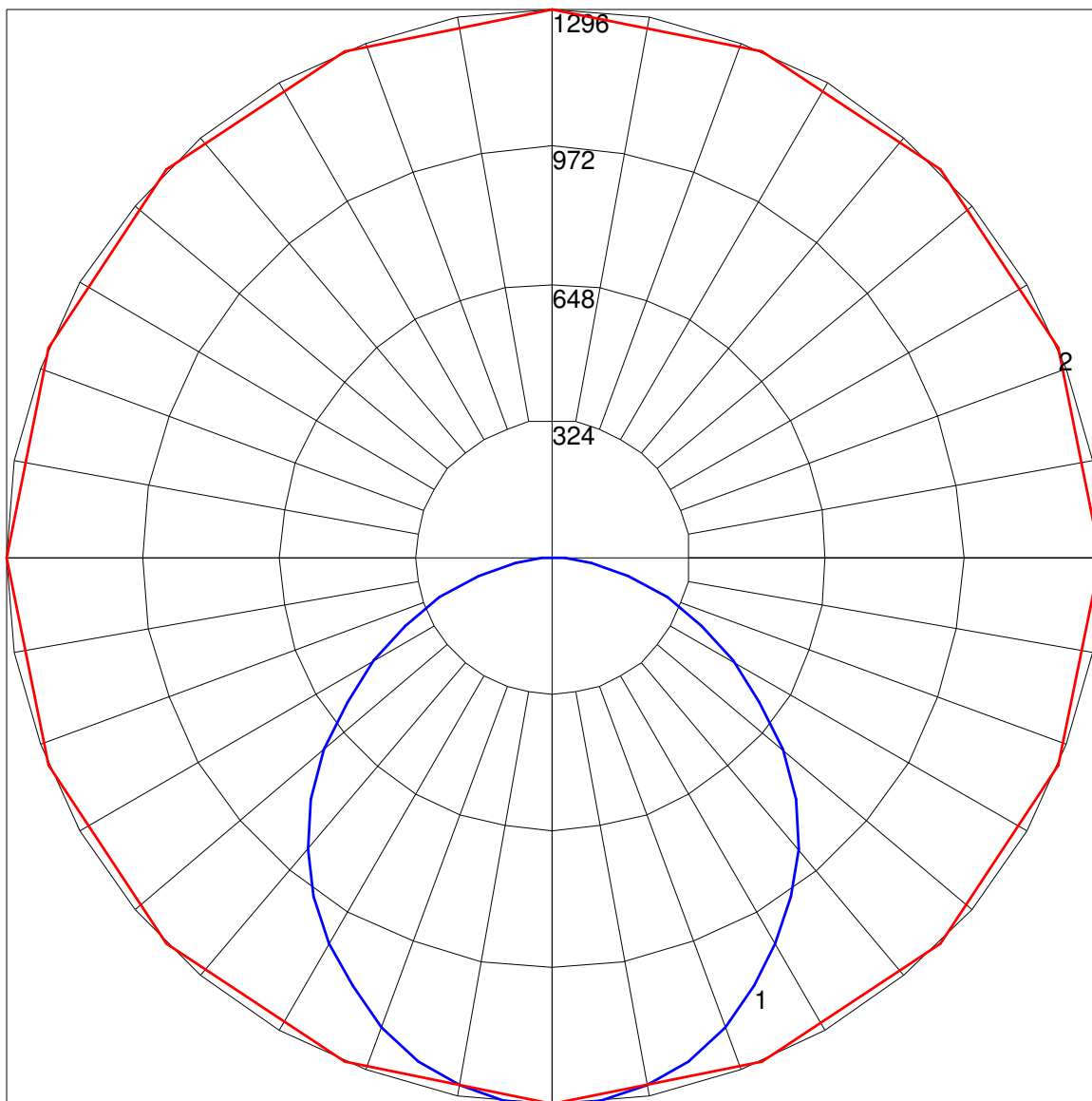
Reflectances

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	15.6	17.3	16.0	17.6	17.9	17.2	18.9	17.6	19.2	19.5
	3H	17.2	18.8	17.6	19.1	19.4	19.8	21.3	20.1	21.6	22.0
	4H	17.8	19.2	18.2	19.6	20.0	20.9	22.4	21.3	22.7	23.1
	6H	18.1	19.5	18.5	19.8	20.2	21.9	23.2	22.3	23.6	24.0
	8H	18.2	19.5	18.6	19.9	20.3	22.2	23.5	22.6	23.9	24.3
	12H	18.2	19.5	18.7	19.8	20.3	22.3	23.6	22.8	24.0	24.4
4H	2H	16.5	18.0	16.9	18.3	18.7	17.8	19.2	18.2	19.6	19.9
	3H	18.4	19.6	18.8	20.0	20.4	20.6	21.8	21.0	22.2	22.6
	4H	19.1	20.2	19.5	20.6	21.1	21.9	23.1	22.4	23.5	23.9
	6H	19.6	20.5	20.0	21.0	21.4	23.1	24.1	23.6	24.6	25.0
	8H	19.7	20.6	20.1	21.0	21.5	23.5	24.4	24.0	24.9	25.3
	12H	19.7	20.6	20.2	21.0	21.5	23.7	24.6	24.2	25.0	25.5
8H	4H	19.8	20.8	20.3	21.2	21.7	22.2	23.2	22.7	23.6	24.1
	6H	20.5	21.2	21.0	21.7	22.2	23.6	24.4	24.1	24.9	25.4
	8H	20.7	21.4	21.2	21.9	22.3	24.2	24.9	24.7	25.4	25.8
	12H	20.8	21.4	21.3	21.9	22.4	24.5	25.1	25.0	25.6	26.2
12H	4H	20.0	20.8	20.5	21.3	21.8	22.3	23.1	22.7	23.6	24.0
	6H	20.7	21.4	21.3	21.9	22.4	23.7	24.4	24.2	24.8	25.4
	8H	21.0	21.6	21.5	22.1	22.7	24.3	24.9	24.8	25.4	25.9

Maximum UGR = 26.2

POLAR GRAPH



Maximum Candela = 1296.167 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.)