



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L49-935-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-L49-935-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	4041
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
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	3494	3753	4041
55	3167	3693	4166
65	2791	3657	4515
75	2148	3876	5278
85	933	3150	3072

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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	1344.773	1344.773	1344.773	1344.773	1344.773
5	1343.615	1337.824	1336.665	1332.032	1335.507
10	1320.449	1314.658	1319.291	1314.658	1318.133
15	1285.701	1283.384	1290.334	1292.650	1296.125
20	1230.103	1238.211	1248.635	1260.218	1262.535
25	1166.397	1182.613	1197.671	1216.203	1220.837
30	1098.058	1116.591	1138.598	1166.397	1175.663
35	1022.769	1038.985	1065.626	1107.324	1116.591
40	937.056	953.272	990.337	1034.352	1049.410
45	844.393	859.450	906.940	953.272	976.438
50	735.513	755.204	815.435	862.925	896.516
55	620.843	648.642	723.931	776.054	816.594
60	511.964	543.238	630.109	696.132	735.513
65	403.085	436.675	528.180	617.368	652.117
70	296.522	332.429	434.358	531.655	567.562
75	189.959	233.974	342.854	438.992	466.790
80	93.821	147.103	236.291	323.163	313.896
85	27.799	56.756	93.821	158.686	91.505
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	490.72	N.A.	12.10
0-30	1043.01	N.A.	25.80
0-40	1712.68	N.A.	42.40
0-60	3054.35	N.A.	75.60
0-80	3928.94	N.A.	97.20
0-90	4041.1	N.A.	100.00
10-90	3914.12	N.A.	96.90
20-40	1221.96	N.A.	30.20
20-50	1921.36	N.A.	47.50
40-70	1864.52	N.A.	46.10
60-80	874.59	N.A.	21.60
70-80	351.74	N.A.	8.70
80-90	112.16	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	4041.1	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	126.98
10-20	363.74
20-30	552.29
30-40	669.67
40-50	699.39
50-60	642.28
60-70	522.85
70-80	351.74
80-90	112.16
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

X=2H	Y=2H	15.8	17.5	16.2	17.8	18.1	17.4	19.1	17.8	19.4	19.7
	3H	17.4	19.0	17.8	19.3	19.6	20.0	21.5	20.3	21.8	22.2
	4H	18.0	19.4	18.4	19.8	20.2	21.1	22.6	21.5	22.9	23.3
	6H	18.3	19.7	18.7	20.0	20.4	22.1	23.4	22.5	23.8	24.2
	8H	18.4	19.7	18.8	20.1	20.5	22.4	23.7	22.8	24.1	24.5
	12H	18.4	19.7	18.9	20.0	20.5	22.5	23.8	23.0	24.2	24.6

UGR Viewed Endwise

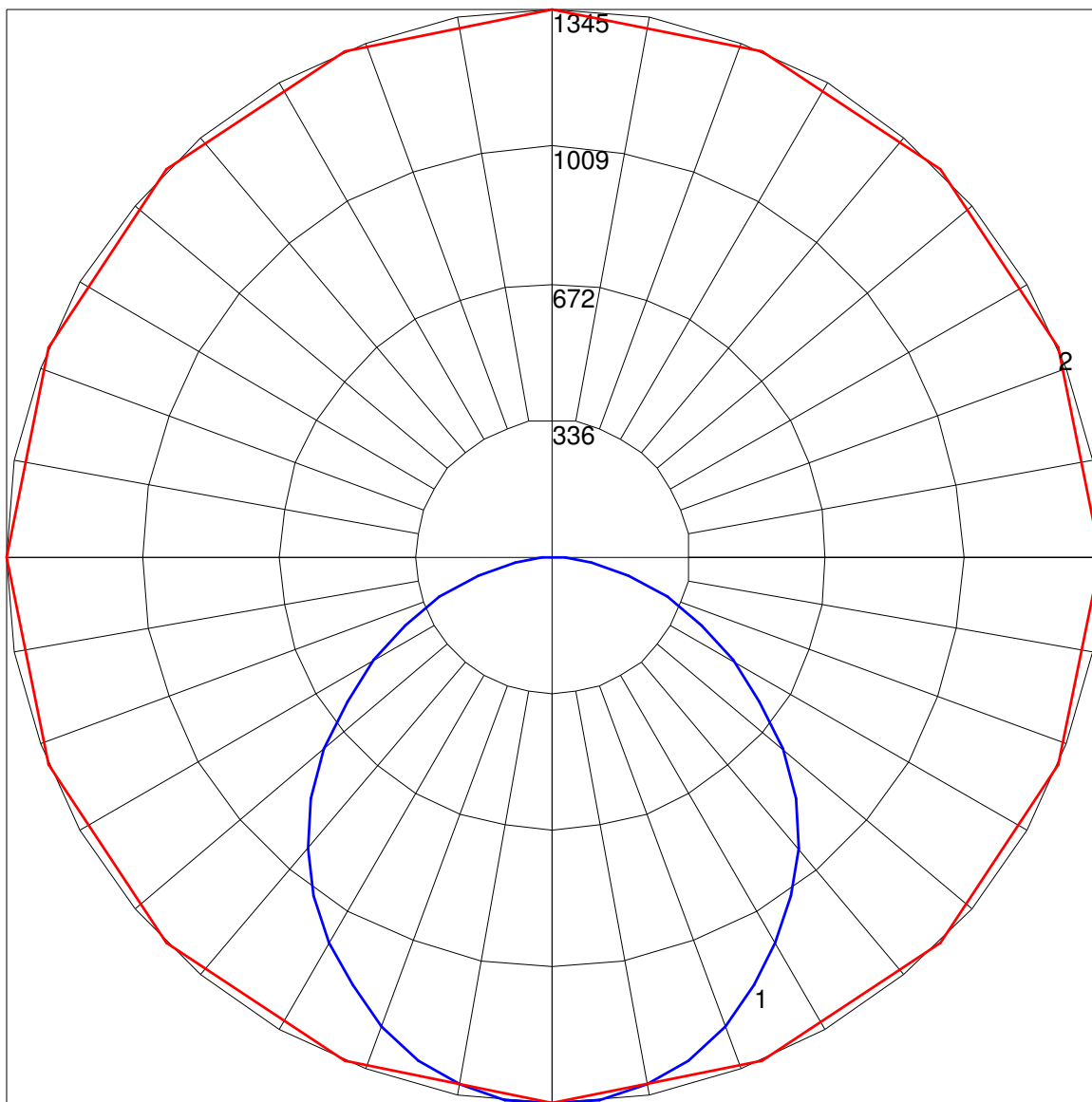
4H	2H	16.7	18.2	17.1	18.5	18.9	18.0	19.4	18.4	19.8	20.1
	3H	18.6	19.8	19.0	20.2	20.6	20.8	22.0	21.2	22.4	22.8
	4H	19.3	20.4	19.7	20.8	21.3	22.1	23.3	22.6	23.7	24.1
	6H	19.8	20.7	20.2	21.2	21.6	23.3	24.3	23.8	24.8	25.2
	8H	19.9	20.8	20.3	21.2	21.7	23.7	24.6	24.2	25.1	25.5
	12H	19.9	20.8	20.4	21.2	21.7	23.9	24.8	24.4	25.2	25.7

8H	4H	20.0	21.0	20.5	21.4	21.9	22.4	23.4	22.9	23.8	24.3
	6H	20.7	21.4	21.2	21.9	22.4	23.8	24.6	24.3	25.1	25.6
	8H	20.9	21.6	21.4	22.1	22.5	24.4	25.1	24.9	25.6	26.0
	12H	21.0	21.6	21.5	22.1	22.6	24.7	25.3	25.2	25.8	26.4

12H	4H	20.2	21.0	20.7	21.5	22.0	22.5	23.3	22.9	23.8	24.2
	6H	20.9	21.6	21.5	22.1	22.6	23.9	24.6	24.4	25.0	25.6
	8H	21.2	21.8	21.7	22.3	22.9	24.5	25.1	25.0	25.6	26.1

Maximum UGR = 26.4

POLAR GRAPH



Maximum Candela = 1344.773 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.)