



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L39-840-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-L39-840-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	4052
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
Total Luminaire Watts	33.1
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	3504	3763	4052
55	3176	3703	4177
65	2798	3667	4527
75	2153	3887	5292
85	936	3158	3080

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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	1348.351	1348.351	1348.351	1348.351	1348.351
5	1347.189	1341.382	1340.221	1335.576	1339.060
10	1323.962	1318.155	1322.800	1318.155	1321.639
15	1289.121	1286.798	1293.766	1296.089	1299.573
20	1233.375	1241.505	1251.957	1263.571	1265.893
25	1169.500	1185.759	1200.857	1219.439	1224.084
30	1100.979	1119.561	1141.627	1169.500	1178.791
35	1025.490	1041.749	1068.460	1110.270	1119.561
40	939.548	955.808	992.971	1037.103	1052.201
45	846.639	861.737	909.353	955.808	979.035
50	737.470	757.213	817.605	865.221	898.900
55	622.494	650.367	725.856	778.118	818.766
60	513.326	544.683	631.785	697.983	737.470
65	404.157	437.837	529.585	619.010	653.851
70	297.311	333.313	435.514	533.069	569.071
75	190.465	234.597	343.766	440.159	468.032
80	94.071	147.494	236.919	324.022	314.731
85	27.873	56.907	94.071	159.108	91.748
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	492.03	N.A.	12.10
0-30	1045.79	N.A.	25.80
0-40	1717.24	N.A.	42.40
0-60	3062.48	N.A.	75.60
0-80	3939.39	N.A.	97.20
0-90	4051.85	N.A.	100.00
10-90	3924.53	N.A.	96.90
20-40	1225.21	N.A.	30.20
20-50	1926.47	N.A.	47.50
40-70	1869.48	N.A.	46.10
60-80	876.91	N.A.	21.60
70-80	352.67	N.A.	8.70
80-90	112.46	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	4051.85	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	127.32
10-20	364.71
20-30	553.76
30-40	671.45
40-50	701.25
50-60	643.98
60-70	524.24
70-80	352.67
80-90	112.46
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	89	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

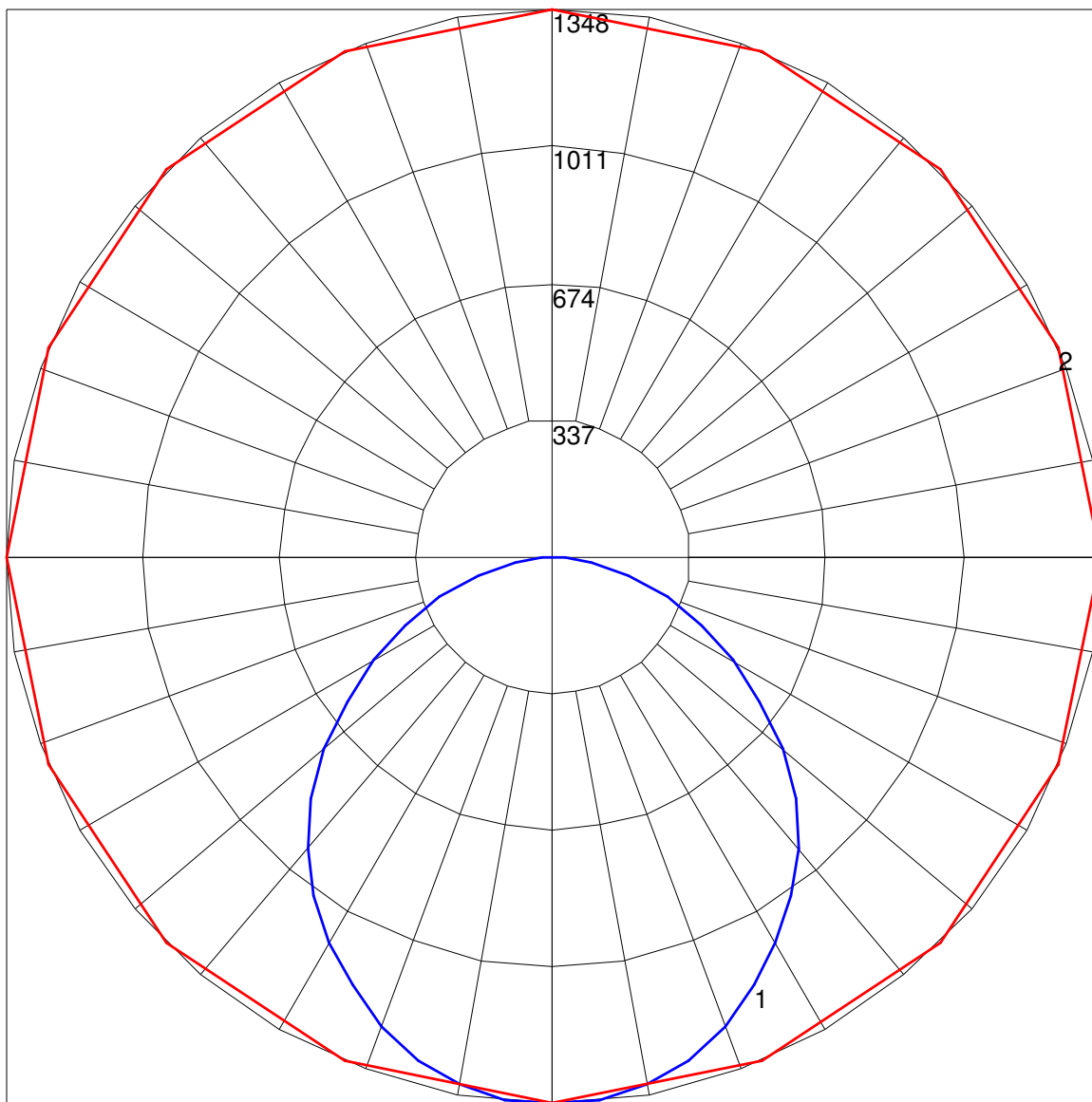
X=2H	Y=2H	15.8	17.5	16.2	17.8	18.1	17.4	19.1	17.8	19.4	19.7
	3H	17.4	19.0	17.8	19.3	19.6	20.0	21.5	20.3	21.8	22.2
	4H	18.0	19.4	18.4	19.8	20.2	21.1	22.6	21.5	22.9	23.3
	6H	18.3	19.7	18.7	20.0	20.4	22.1	23.4	22.5	23.8	24.2
	8H	18.4	19.7	18.8	20.1	20.5	22.4	23.7	22.8	24.1	24.5
	12H	18.4	19.7	18.9	20.0	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	20.9	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 = 1348.351 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.)