



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L39-835-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-L39-835-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	3934
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
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	3402	3654	3934
55	3083	3595	4056
65	2717	3560	4396
75	2091	3774	5138
85	909	3066	2991

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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	1309.079	1309.079	1309.079	1309.079	1309.079
5	1307.951	1302.313	1301.186	1296.676	1300.058
10	1285.400	1279.762	1284.273	1279.762	1283.145
15	1251.574	1249.319	1256.084	1258.339	1261.722
20	1197.452	1205.345	1215.492	1226.768	1229.023
25	1135.437	1151.222	1165.881	1183.921	1188.431
30	1068.912	1086.952	1108.376	1135.437	1144.457
35	995.621	1011.407	1037.341	1077.932	1086.952
40	912.183	927.969	964.050	1006.897	1021.555
45	821.980	836.638	882.867	927.969	950.520
50	715.990	735.159	793.791	840.020	872.719
55	604.364	631.425	704.715	755.455	794.919
60	498.374	528.818	613.384	677.654	715.990
65	392.385	425.084	514.160	600.981	634.807
70	288.651	323.605	422.829	517.543	552.497
75	184.917	227.764	333.753	427.339	454.400
80	91.331	143.198	230.019	314.585	305.564
85	27.061	55.250	91.331	154.474	89.076
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	477.70	N.A.	12.10
0-30	1015.33	N.A.	25.80
0-40	1667.22	N.A.	42.40
0-60	2973.28	N.A.	75.60
0-80	3824.65	N.A.	97.20
0-90	3933.83	N.A.	100.00
10-90	3810.23	N.A.	96.90
20-40	1189.53	N.A.	30.20
20-50	1870.36	N.A.	47.50
40-70	1815.03	N.A.	46.10
60-80	851.37	N.A.	21.60
70-80	342.40	N.A.	8.70
80-90	109.18	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	3933.83	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	123.61
10-20	354.09
20-30	537.63
30-40	651.89
40-50	680.83
50-60	625.23
60-70	508.97
70-80	342.40
80-90	109.18
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

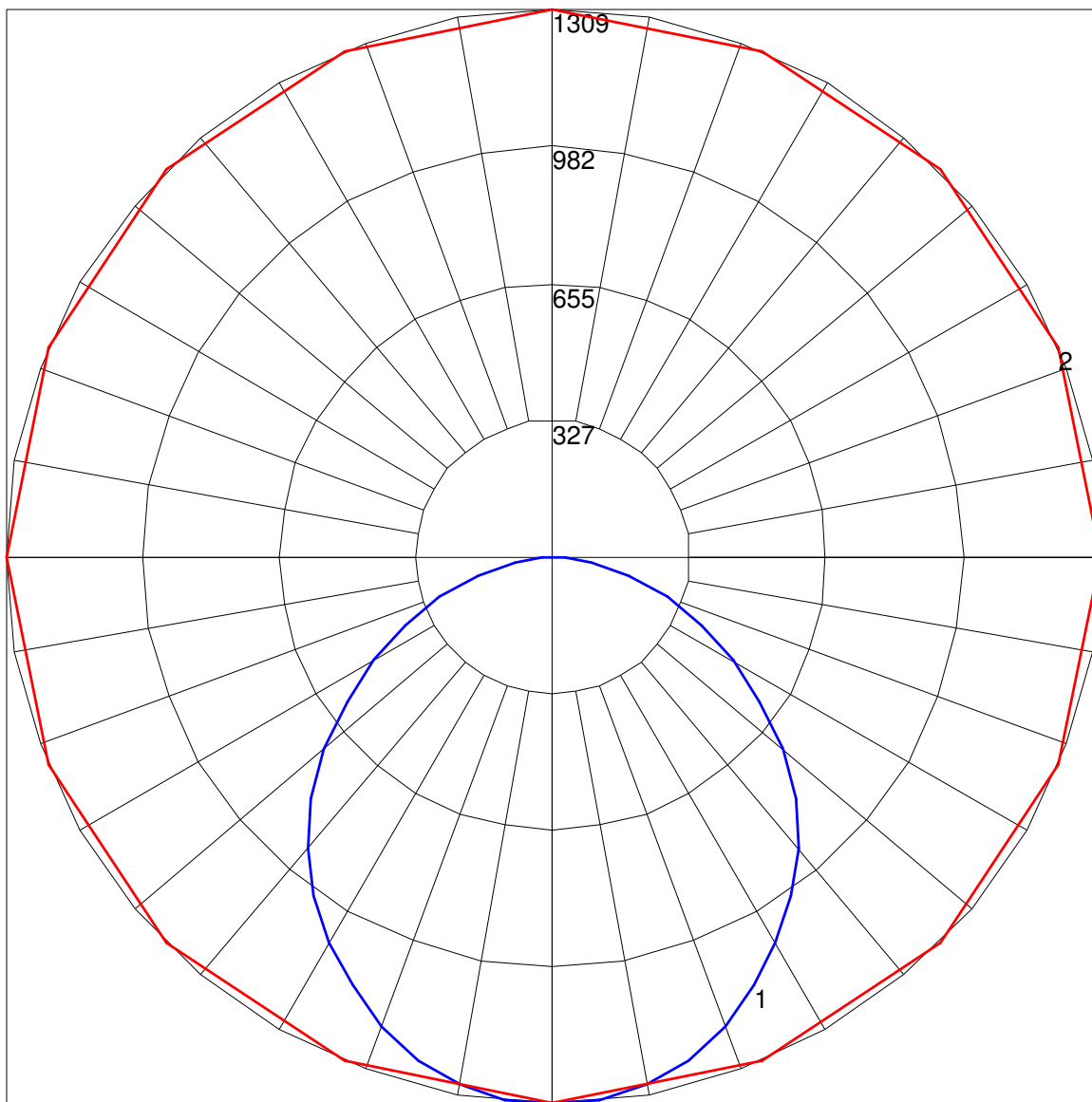
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	15.7	17.4	16.1	17.7	18.0	17.3	19.0	17.7	19.3	19.6
	3H	17.3	18.9	17.7	19.2	19.5	19.9	21.4	20.2	21.7	22.1
	4H	17.9	19.3	18.3	19.7	20.1	21.0	22.5	21.4	22.8	23.2
	6H	18.2	19.6	18.6	19.9	20.3	22.0	23.3	22.4	23.7	24.1
	8H	18.3	19.6	18.7	20.0	20.4	22.3	23.6	22.7	24.0	24.4
	12H	18.3	19.6	18.8	19.9	20.4	22.4	23.7	22.9	24.1	24.5
4H	2H	16.6	18.1	17.0	18.4	18.8	17.9	19.3	18.3	19.7	20.0
	3H	18.5	19.7	18.9	20.1	20.5	20.7	21.9	21.1	22.3	22.7
	4H	19.2	20.3	19.6	20.7	21.2	22.0	23.2	22.5	23.6	24.0
	6H	19.7	20.6	20.1	21.1	21.5	23.2	24.2	23.7	24.7	25.1
	8H	19.8	20.7	20.2	21.1	21.6	23.6	24.5	24.1	25.0	25.4
	12H	19.8	20.7	20.3	21.1	21.6	23.8	24.7	24.3	25.1	25.6
8H	4H	19.9	20.8	20.4	21.3	21.8	22.3	23.3	22.8	23.7	24.2
	6H	20.6	21.3	21.1	21.8	22.3	23.7	24.5	24.2	25.0	25.5
	8H	20.8	21.5	21.3	22.0	22.4	24.3	25.0	24.8	25.5	25.9
	12H	20.9	21.5	21.4	22.0	22.5	24.6	25.2	25.1	25.7	26.3
12H	4H	20.1	20.9	20.6	21.4	21.9	22.4	23.2	22.8	23.7	24.1
	6H	20.8	21.5	21.4	22.0	22.5	23.8	24.5	24.3	24.9	25.5
	8H	21.1	21.7	21.6	22.2	22.8	24.4	25.0	24.9	25.5	26.0

Maximum UGR = 26.3

POLAR GRAPH



Maximum Candela = 1309.079 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.)