



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L39-935-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-L39-935-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	3265
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
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	2823	3033	3265
55	2559	2984	3366
65	2255	2955	3648
75	1735	3132	4264
85	754	2545	2482

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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	1086.535	1086.535	1086.535	1086.535	1086.535
5	1085.599	1080.920	1079.984	1076.240	1079.048
10	1066.882	1062.203	1065.946	1062.203	1065.010
15	1038.806	1036.934	1042.549	1044.421	1047.229
20	993.885	1000.436	1008.858	1018.217	1020.089
25	942.412	955.514	967.681	982.654	986.398
30	887.197	902.170	919.952	942.412	949.899
35	826.366	839.468	860.992	894.683	902.170
40	757.112	770.214	800.161	835.724	847.890
45	682.243	694.409	732.779	770.214	788.931
50	594.272	610.182	658.846	697.217	724.357
55	501.622	524.082	584.913	627.027	659.782
60	413.651	438.919	509.109	562.453	594.272
65	325.680	352.820	426.753	498.814	526.890
70	239.580	268.592	350.948	429.560	458.572
75	153.481	189.044	277.015	354.691	377.152
80	75.805	118.854	190.916	261.105	253.618
85	22.461	45.857	75.805	128.213	73.933
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	396.49	N.A.	12.10
0-30	842.72	N.A.	25.80
0-40	1383.8	N.A.	42.40
0-60	2467.82	N.A.	75.60
0-80	3174.46	N.A.	97.20
0-90	3265.08	N.A.	100.00
10-90	3162.49	N.A.	96.90
20-40	987.31	N.A.	30.20
20-50	1552.4	N.A.	47.50
40-70	1506.47	N.A.	46.10
60-80	706.64	N.A.	21.60
70-80	284.19	N.A.	8.70
80-90	90.62	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	3265.08	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	102.59
10-20	293.89
20-30	446.24
30-40	541.07
40-50	565.09
50-60	518.94
60-70	422.45
70-80	284.19
80-90	90.62
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

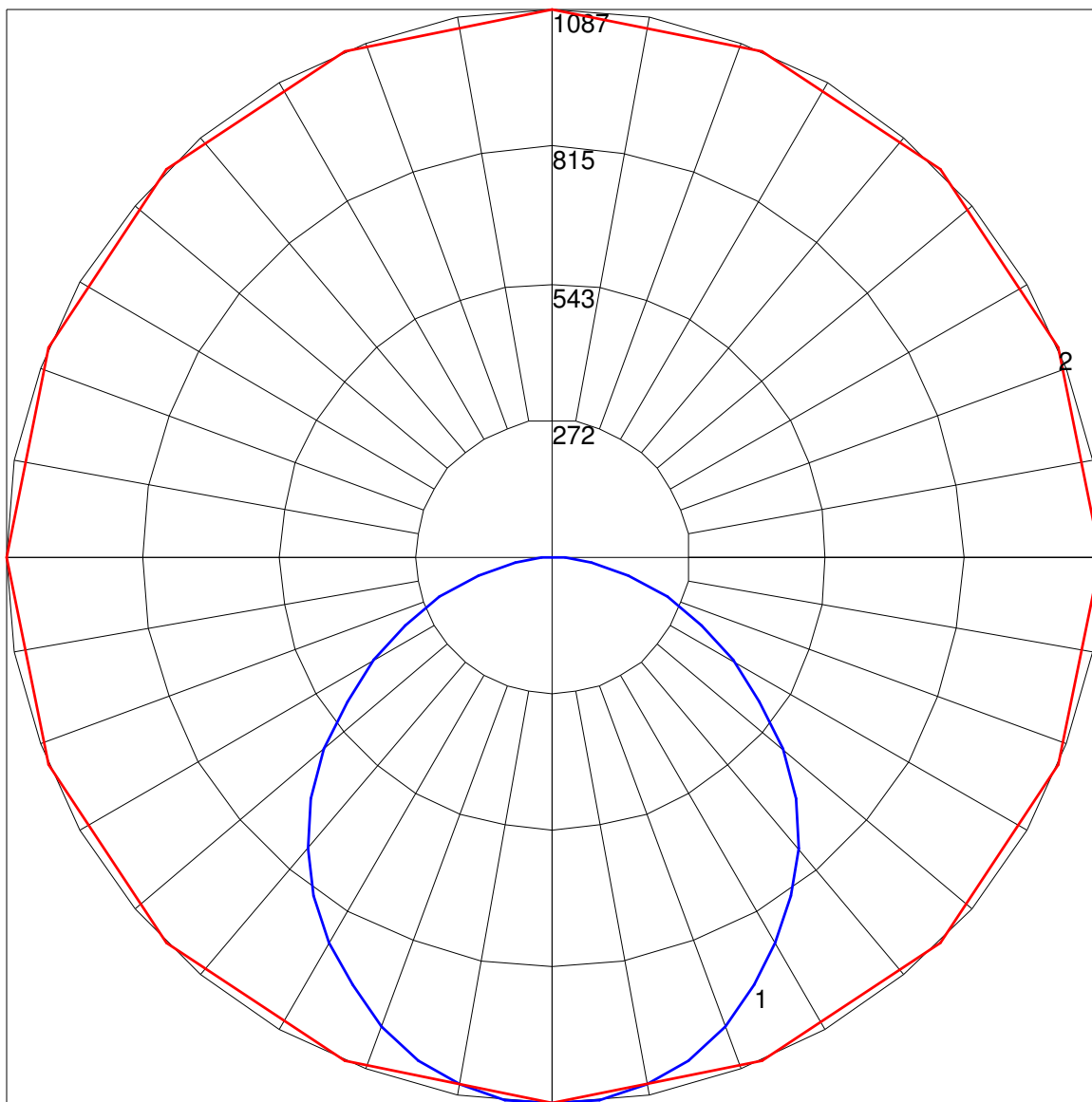
Reflectances

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	15.0	16.7	15.4	17.0	17.3	16.6	18.3	17.0	18.6	18.9
	3H	16.6	18.2	17.0	18.5	18.8	19.2	20.7	19.5	21.0	21.4
	4H	17.2	18.6	17.6	19.0	19.4	20.3	21.8	20.7	22.1	22.5
	6H	17.5	18.9	17.9	19.2	19.6	21.3	22.6	21.7	23.0	23.4
	8H	17.6	18.9	18.0	19.3	19.7	21.6	22.9	22.0	23.3	23.7
	12H	17.6	18.9	18.1	19.2	19.7	21.7	23.0	22.2	23.4	23.8
4H	2H	15.9	17.4	16.3	17.7	18.1	17.2	18.6	17.6	19.0	19.3
	3H	17.8	19.0	18.2	19.4	19.8	20.0	21.2	20.4	21.6	22.0
	4H	18.5	19.6	18.9	20.0	20.5	21.3	22.5	21.8	22.9	23.3
	6H	19.0	19.9	19.4	20.4	20.8	22.5	23.5	23.0	24.0	24.4
	8H	19.1	20.0	19.5	20.4	20.9	22.9	23.8	23.4	24.3	24.7
	12H	19.1	20.0	19.6	20.4	20.9	23.1	24.0	23.6	24.4	24.9
8H	4H	19.2	20.2	19.7	20.6	21.1	21.6	22.6	22.1	23.0	23.5
	6H	19.9	20.6	20.4	21.1	21.6	23.0	23.8	23.5	24.3	24.8
	8H	20.1	20.8	20.6	21.3	21.7	23.6	24.3	24.1	24.8	25.2
	12H	20.2	20.8	20.7	21.3	21.8	23.9	24.5	24.4	25.0	25.6
12H	4H	19.4	20.2	19.9	20.7	21.2	21.7	22.5	22.1	23.0	23.4
	6H	20.2	20.8	20.7	21.3	21.8	23.1	23.8	23.6	24.2	24.8
	8H	20.4	21.0	20.9	21.5	22.1	23.7	24.3	24.2	24.8	25.3

Maximum UGR = 25.6

POLAR GRAPH



Maximum Candela = 1086.535 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.)