



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L39-827-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-L39-827-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	3816
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
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	3300	3544	3816
55	2991	3487	3934
65	2635	3453	4264
75	2028	3660	4983
85	881	2974	2901

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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	1269.805	1269.805	1269.805	1269.805	1269.805
5	1268.712	1263.243	1262.149	1257.775	1261.056
10	1246.837	1241.369	1245.744	1241.369	1244.650
15	1214.026	1211.838	1218.401	1220.588	1223.869
20	1161.527	1169.183	1179.027	1189.964	1192.152
25	1101.373	1116.685	1130.903	1148.403	1152.778
30	1036.844	1054.343	1075.124	1101.373	1110.123
35	965.752	981.064	1006.220	1045.593	1054.343
40	884.817	900.129	935.128	976.689	990.908
45	797.320	811.538	856.380	900.129	922.003
50	694.510	713.103	769.977	814.819	846.537
55	586.232	612.482	683.573	732.790	771.070
60	483.423	512.953	594.982	657.324	694.510
65	380.614	412.331	498.735	582.951	615.763
70	279.992	313.897	410.144	502.016	535.921
75	179.370	220.931	323.740	414.519	440.768
80	88.591	138.902	223.118	305.147	296.397
85	26.249	53.592	88.591	149.839	86.404
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	463.36	N.A.	12.10
0-30	984.87	N.A.	25.80
0-40	1617.21	N.A.	42.40
0-60	2884.08	N.A.	75.60
0-80	3709.91	N.A.	97.20
0-90	3815.82	N.A.	100.00
10-90	3695.92	N.A.	96.90
20-40	1153.84	N.A.	30.20
20-50	1814.25	N.A.	47.50
40-70	1760.58	N.A.	46.10
60-80	825.83	N.A.	21.60
70-80	332.13	N.A.	8.70
80-90	105.91	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	3815.82	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	119.90
10-20	343.47
20-30	521.50
30-40	632.34
40-50	660.40
50-60	606.47
60-70	493.70
70-80	332.13
80-90	105.91
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

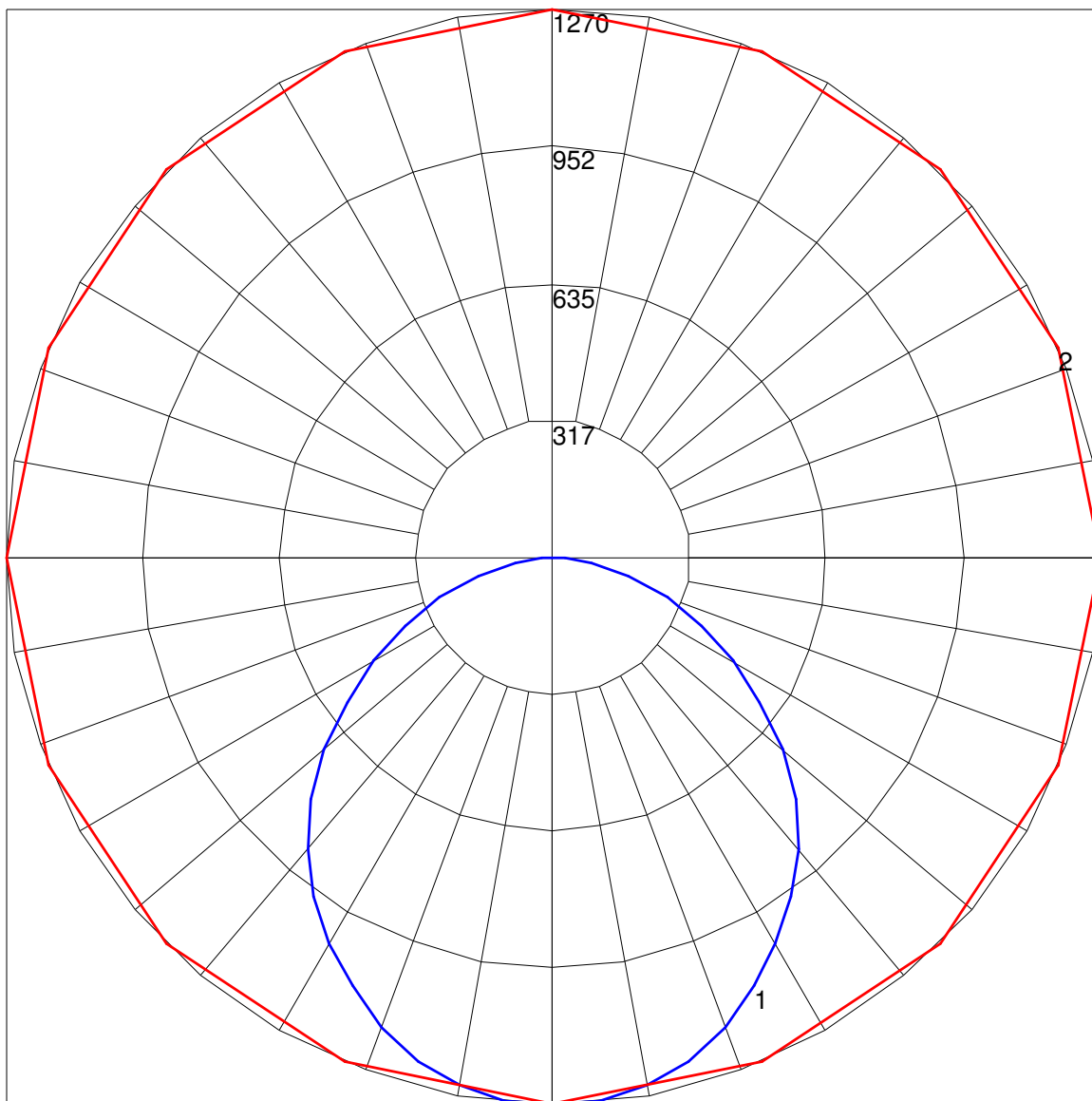
Reflectances

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	15.6	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	20.7	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 = 1269.805 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.)