

IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L33-840-AF-(L33)-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] 07-24-2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 1-56 LED 22"ARRAYS 2x2'RECESSED LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CENTER LENS

[LUMCAT] LT-22-L33-840-AF-(L33)-DIM-UNV

[_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	3410
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	26.64
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	2949	3167	3410
55	2673	3116	3515
65	2355	3086	3810
75	1812	3271	4453
85	788	2658	2592

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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	1134.712	1134.712	1134.712	1134.712	1134.712
5	1133.735	1128.848	1127.870	1123.961	1126.893
10	1114.187	1109.301	1113.210	1109.301	1112.233
15	1084.867	1082.912	1088.776	1090.731	1093.663
20	1037.954	1044.795	1053.591	1063.365	1065.320
25	984.199	997.882	1010.588	1026.225	1030.135
30	926.535	942.173	960.742	984.199	992.018
35	863.007	876.690	899.169	934.354	942.173
40	790.682	804.365	835.641	872.780	885.486
45	712.494	725.199	765.271	804.365	823.912
50	620.622	637.237	688.060	728.131	756.475
55	523.864	547.320	610.848	654.829	689.037
60	431.992	458.381	531.682	587.392	620.622
65	340.120	368.464	445.675	520.931	550.252
70	250.203	280.502	366.509	448.607	478.905
75	160.287	197.426	289.298	370.418	393.875
80	79.166	124.124	199.381	272.683	264.864
85	23.457	47.891	79.166	133.898	77.211
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	414.07	N.A.	12.10
0-30	880.09	N.A.	25.80
0-40	1445.15	N.A.	42.40
0-60	2577.25	N.A.	75.60
0-80	3315.22	N.A.	97.20
0-90	3409.85	N.A.	100.00
10-90	3302.71	N.A.	96.90
20-40	1031.09	N.A.	30.20
20-50	1621.23	N.A.	47.50
40-70	1573.27	N.A.	46.10
60-80	737.97	N.A.	21.60
70-80	296.79	N.A.	8.70
80-90	94.64	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	3409.85	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	107.14
10-20	306.92
20-30	466.02
30-40	565.06
40-50	590.14
50-60	541.95
60-70	441.18
70-80	296.79
80-90	94.64
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

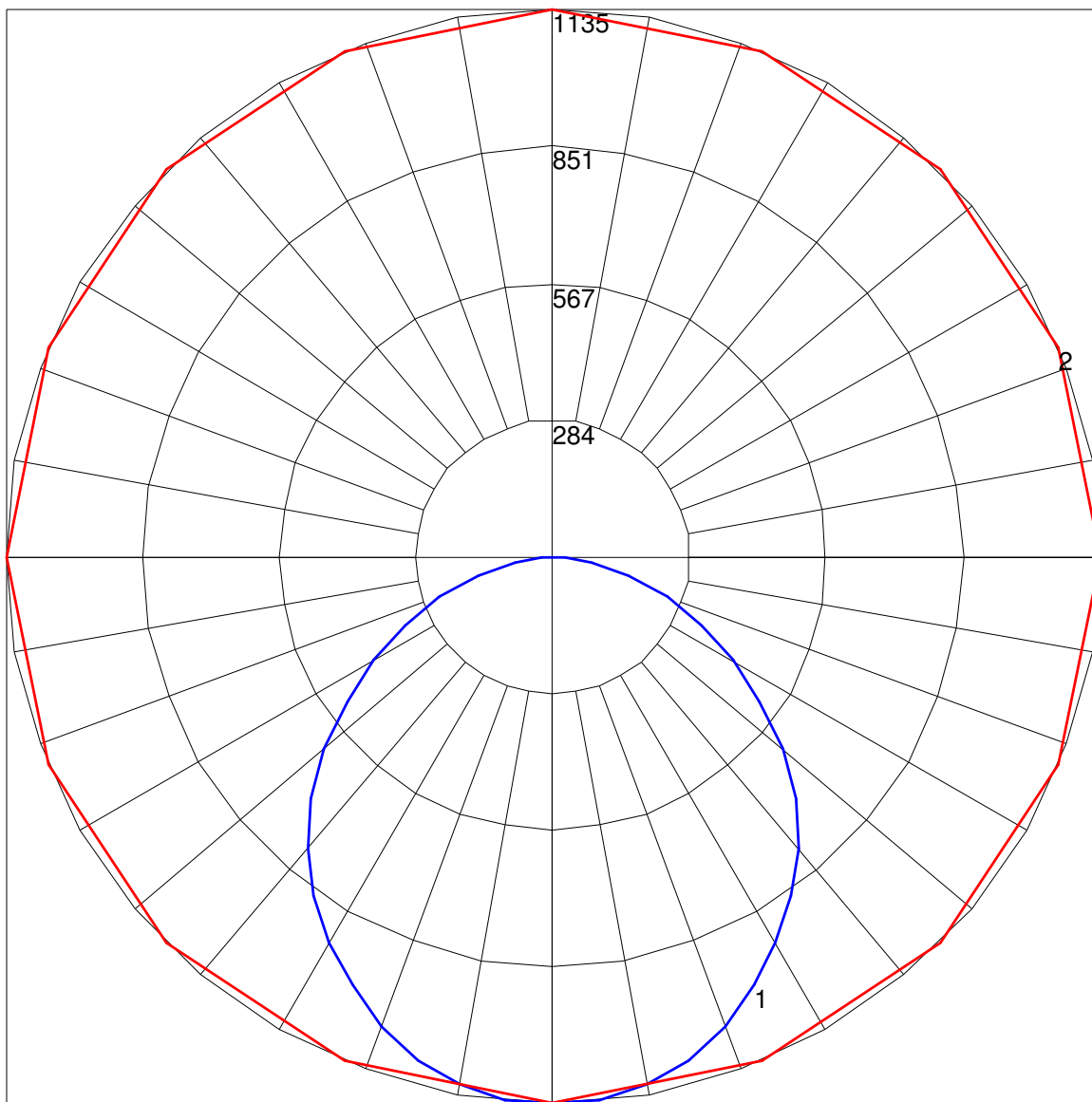
Reflectances

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	15.2	16.9	15.6	17.2	17.5	16.8	18.5	17.2	18.8	19.1
	3H	16.8	18.4	17.2	18.7	19.0	19.4	20.9	19.7	21.2	21.6
	4H	17.4	18.8	17.8	19.2	19.6	20.5	22.0	20.9	22.3	22.7
	6H	17.7	19.1	18.1	19.4	19.8	21.5	22.8	21.9	23.2	23.6
	8H	17.8	19.1	18.2	19.5	19.9	21.8	23.1	22.2	23.5	23.9
	12H	17.8	19.1	18.3	19.4	19.9	21.9	23.2	22.4	23.6	24.0
4H	2H	16.1	17.6	16.5	17.9	18.3	17.4	18.8	17.8	19.2	19.5
	3H	18.0	19.2	18.4	19.6	20.0	20.2	21.4	20.6	21.8	22.2
	4H	18.7	19.8	19.1	20.2	20.7	21.5	22.7	22.0	23.1	23.5
	6H	19.2	20.1	19.6	20.6	21.0	22.7	23.7	23.2	24.2	24.6
	8H	19.3	20.2	19.7	20.6	21.1	23.1	24.0	23.6	24.5	24.9
	12H	19.3	20.2	19.8	20.6	21.1	23.3	24.2	23.8	24.6	25.1
8H	4H	19.4	20.4	19.9	20.8	21.3	21.8	22.8	22.3	23.2	23.7
	6H	20.1	20.8	20.6	21.3	21.8	23.2	24.0	23.7	24.5	25.0
	8H	20.3	21.0	20.8	21.5	21.9	23.8	24.5	24.3	25.0	25.4
	12H	20.4	21.0	20.9	21.5	22.0	24.1	24.7	24.6	25.2	25.8
12H	4H	19.6	20.4	20.1	20.9	21.4	21.9	22.7	22.3	23.2	23.6
	6H	20.3	21.0	20.9	21.5	22.0	23.3	24.0	23.8	24.4	25.0
	8H	20.6	21.2	21.1	21.7	22.3	23.9	24.5	24.4	25.0	25.5

Maximum UGR = 25.8

POLAR GRAPH



Maximum Candela = 1134.712 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.)