



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L27-840-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-L27-840-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	2804
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
Total Luminaire Watts	21.3
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	2424	2604	2803
55	2197	2562	2890
65	1936	2537	3133
75	1490	2689	3661
85	648	2185	2131

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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	932.946	932.946	932.946	932.946	932.946
5	932.143	928.125	927.321	924.107	926.518
10	916.071	912.053	915.268	912.053	914.464
15	891.964	890.357	895.178	896.785	899.196
20	853.393	859.018	866.250	874.285	875.893
25	809.196	820.446	830.893	843.750	846.964
30	761.786	774.643	789.911	809.196	815.625
35	709.553	720.803	739.286	768.214	774.643
40	650.089	661.339	687.053	717.589	728.036
45	585.803	596.250	629.196	661.339	677.411
50	510.268	523.928	565.714	598.661	621.964
55	430.714	450.000	502.232	538.393	566.518
60	355.178	376.875	437.143	482.946	510.268
65	279.643	302.946	366.428	428.303	452.411
70	205.714	230.625	301.339	368.839	393.750
75	131.786	162.321	237.857	304.553	323.839
80	65.089	102.054	163.929	224.196	217.768
85	19.286	39.375	65.089	110.089	63.482
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	340.44	N.A.	12.10
0-30	723.60	N.A.	25.80
0-40	1188.19	N.A.	42.40
0-60	2118.98	N.A.	75.60
0-80	2725.73	N.A.	97.20
0-90	2803.54	N.A.	100.00
10-90	2715.45	N.A.	96.90
20-40	847.75	N.A.	30.20
20-50	1332.95	N.A.	47.50
40-70	1293.52	N.A.	46.10
60-80	606.75	N.A.	21.60
70-80	244.02	N.A.	8.70
80-90	77.81	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	2803.54	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	88.09
10-20	252.35
20-30	383.16
30-40	464.59
40-50	485.21
50-60	445.58
60-70	362.73
70-80	244.02
80-90	77.81
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	80	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	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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UGR TABLE - CORRECTED

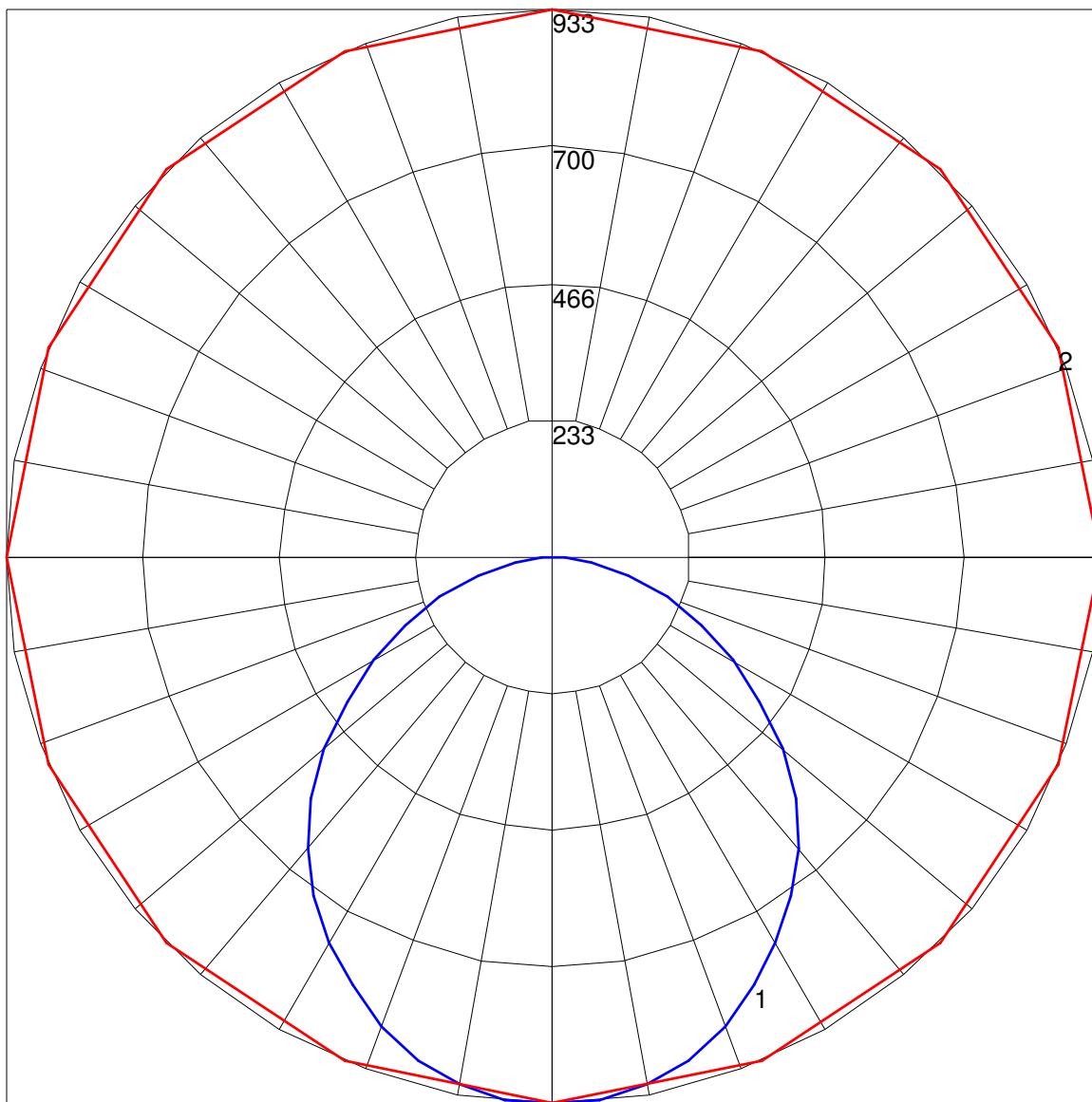
Reflectances

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	14.5	16.2	14.9	16.5	16.8	16.1	17.8	16.5	18.1	18.4
	3H	16.1	17.7	16.5	18.0	18.3	18.7	20.2	19.0	20.5	20.9
	4H	16.7	18.1	17.1	18.5	18.9	19.8	21.3	20.2	21.6	22.0
	6H	17.0	18.4	17.4	18.7	19.1	20.8	22.1	21.2	22.5	22.9
	8H	17.1	18.4	17.5	18.8	19.2	21.1	22.4	21.5	22.8	23.2
	12H	17.1	18.4	17.6	18.7	19.2	21.2	22.5	21.7	22.9	23.3
4H	2H	15.4	16.9	15.8	17.2	17.6	16.7	18.1	17.1	18.5	18.8
	3H	17.3	18.5	17.7	18.9	19.3	19.5	20.7	19.9	21.1	21.5
	4H	18.0	19.1	18.4	19.5	20.0	20.8	22.0	21.3	22.4	22.8
	6H	18.5	19.4	18.9	19.9	20.3	22.0	23.0	22.5	23.5	23.9
	8H	18.6	19.5	19.0	19.9	20.4	22.4	23.3	22.9	23.8	24.2
	12H	18.6	19.5	19.1	19.9	20.4	22.6	23.5	23.1	23.9	24.4
8H	4H	18.7	19.6	19.2	20.1	20.6	21.1	22.1	21.6	22.5	23.0
	6H	19.4	20.1	19.9	20.6	21.1	22.5	23.3	23.0	23.8	24.3
	8H	19.6	20.3	20.1	20.8	21.2	23.1	23.8	23.6	24.3	24.7
	12H	19.7	20.3	20.2	20.8	21.3	23.4	24.0	23.9	24.5	25.1
12H	4H	18.9	19.7	19.4	20.2	20.7	21.2	22.0	21.6	22.5	22.9
	6H	19.6	20.3	20.2	20.8	21.3	22.6	23.3	23.1	23.7	24.3
	8H	19.9	20.5	20.4	21.0	21.6	23.2	23.8	23.7	24.3	24.8

Maximum UGR = 25.1

POLAR GRAPH



Maximum Candela = 932.946 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.)