



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L61-827-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-L61-827-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	5952
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	50.9
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	5147	5528	5951
55	4665	5440	6136
65	4111	5386	6650
75	3163	5709	7773
85	1375	4639	4525

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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	1980.561	1980.561	1980.561	1980.561	1980.561
5	1978.856	1970.326	1968.620	1961.796	1966.914
10	1944.737	1936.208	1943.031	1936.208	1941.326
15	1893.560	1890.148	1900.384	1903.796	1908.913
20	1811.676	1823.618	1838.971	1856.030	1859.442
25	1717.851	1741.734	1763.911	1791.205	1798.029
30	1617.203	1644.497	1676.909	1717.851	1731.499
35	1506.319	1530.201	1569.437	1630.850	1644.497
40	1380.081	1403.964	1458.553	1523.378	1545.554
45	1243.608	1265.785	1335.728	1403.964	1438.082
50	1083.253	1112.253	1200.961	1270.903	1320.374
55	914.368	955.310	1066.194	1142.960	1202.667
60	754.012	800.072	928.015	1025.252	1083.253
65	593.657	643.128	777.895	909.250	960.427
70	436.713	489.596	639.716	783.013	835.896
75	279.769	344.594	504.949	646.540	687.482
80	138.179	216.651	348.006	475.949	462.302
85	40.942	83.590	138.179	233.710	134.767
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	722.73	N.A.	12.10
0-30	1536.14	N.A.	25.80
0-40	2522.41	N.A.	42.40
0-60	4498.4	N.A.	75.60
0-80	5786.48	N.A.	97.20
0-90	5951.67	N.A.	100.00
10-90	5764.65	N.A.	96.90
20-40	1799.69	N.A.	30.20
20-50	2829.74	N.A.	47.50
40-70	2746.03	N.A.	46.10
60-80	1288.08	N.A.	21.60
70-80	518.03	N.A.	8.70
80-90	165.19	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	5951.67	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	187.01
10-20	535.72
20-30	813.41
30-40	986.28
40-50	1030.06
50-60	945.93
60-70	770.04
70-80	518.03
80-90	165.19
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

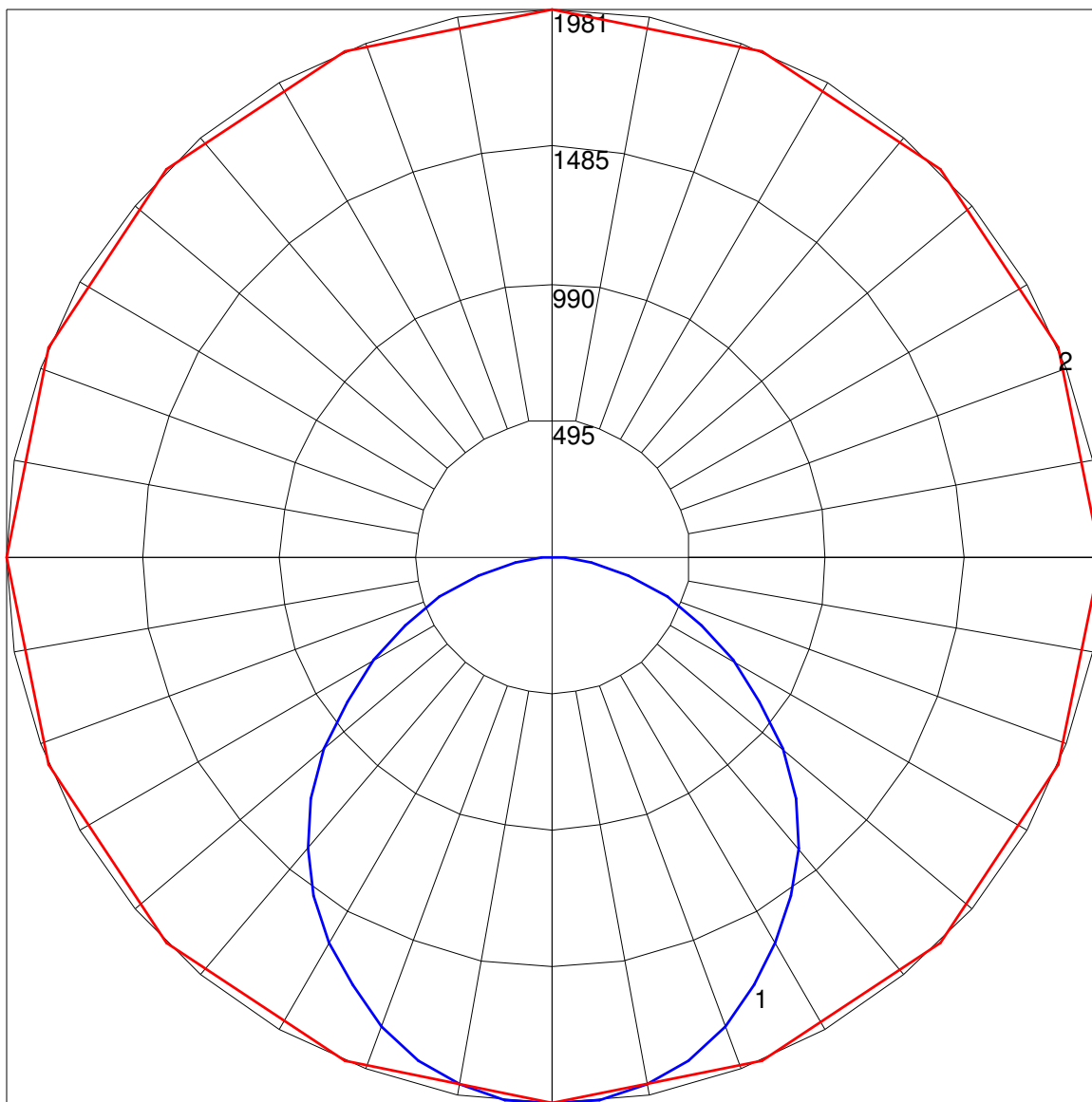
Reflectances

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	17.1	18.8	17.5	19.1	19.4	18.7	20.4	19.1	20.7	21.0
	3H	18.7	20.3	19.1	20.6	20.9	21.3	22.8	21.6	23.1	23.5
	4H	19.3	20.7	19.7	21.1	21.5	22.4	23.9	22.8	24.2	24.6
	6H	19.6	21.0	20.0	21.3	21.7	23.4	24.7	23.8	25.1	25.5
	8H	19.7	21.0	20.1	21.4	21.8	23.7	25.0	24.1	25.4	25.8
	12H	19.7	21.0	20.2	21.3	21.8	23.8	25.1	24.3	25.5	25.9
4H	2H	18.0	19.5	18.4	19.8	20.2	19.3	20.7	19.7	21.1	21.4
	3H	19.9	21.1	20.3	21.5	21.9	22.1	23.3	22.5	23.7	24.1
	4H	20.6	21.7	21.0	22.1	22.6	23.4	24.6	23.9	25.0	25.4
	6H	21.1	22.0	21.5	22.5	22.9	24.6	25.6	25.1	26.1	26.5
	8H	21.2	22.1	21.6	22.5	23.0	25.0	25.9	25.5	26.4	26.8
	12H	21.2	22.1	21.7	22.5	23.0	25.2	26.1	25.7	26.5	27.0
8H	4H	21.3	22.3	21.8	22.7	23.2	23.7	24.7	24.2	25.1	25.6
	6H	22.0	22.7	22.5	23.2	23.7	25.1	25.9	25.6	26.4	26.9
	8H	22.2	22.9	22.7	23.4	23.8	25.7	26.4	26.2	26.9	27.3
	12H	22.3	22.9	22.8	23.4	23.9	26.0	26.6	26.5	27.1	27.7
12H	4H	21.5	22.3	22.0	22.8	23.3	23.8	24.6	24.2	25.1	25.5
	6H	22.3	22.9	22.8	23.4	23.9	25.2	25.9	25.7	26.3	26.9
	8H	22.5	23.1	23.0	23.6	24.2	25.8	26.4	26.3	26.9	27.4

Maximum UGR = 27.7

POLAR GRAPH



Maximum Candela = 1980.561 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.)