



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L27-830-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-L27-830-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	2695
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	127
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	2330	2503	2695
55	2112	2463	2778
65	1861	2439	3011
75	1432	2585	3519
85	622	2101	2049

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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	896.715	896.715	896.715	896.715	896.715
5	895.943	892.081	891.309	888.219	890.536
10	880.496	876.634	879.723	876.634	878.951
15	857.325	855.780	860.414	861.959	864.276
20	820.251	825.658	832.609	840.333	841.877
25	777.771	788.584	798.625	810.983	814.072
30	732.202	744.559	759.234	777.771	783.950
35	681.998	692.811	710.575	738.381	744.559
40	624.843	635.656	660.372	689.722	699.762
45	563.054	573.095	604.761	635.656	651.103
50	490.452	503.582	543.745	575.412	597.810
55	413.987	432.524	482.728	517.484	544.517
60	341.385	362.239	420.166	464.191	490.452
65	268.783	291.181	352.198	411.670	434.841
70	197.725	221.669	289.637	354.515	378.459
75	126.668	156.018	228.620	292.726	311.263
80	62.562	98.090	157.562	215.490	209.311
85	18.537	37.846	62.562	105.814	61.017
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	327.22	N.A.	12.10
0-30	695.50	N.A.	25.80
0-40	1142.04	N.A.	42.40
0-60	2036.69	N.A.	75.60
0-80	2619.88	N.A.	97.20
0-90	2694.66	N.A.	100.00
10-90	2609.99	N.A.	96.90
20-40	814.82	N.A.	30.20
20-50	1281.19	N.A.	47.50
40-70	1243.29	N.A.	46.10
60-80	583.19	N.A.	21.60
70-80	234.54	N.A.	8.70
80-90	74.79	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	2694.66	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	84.67
10-20	242.55
20-30	368.28
30-40	446.55
40-50	466.37
50-60	428.28
60-70	348.64
70-80	234.54
80-90	74.79
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	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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UGR TABLE - CORRECTED

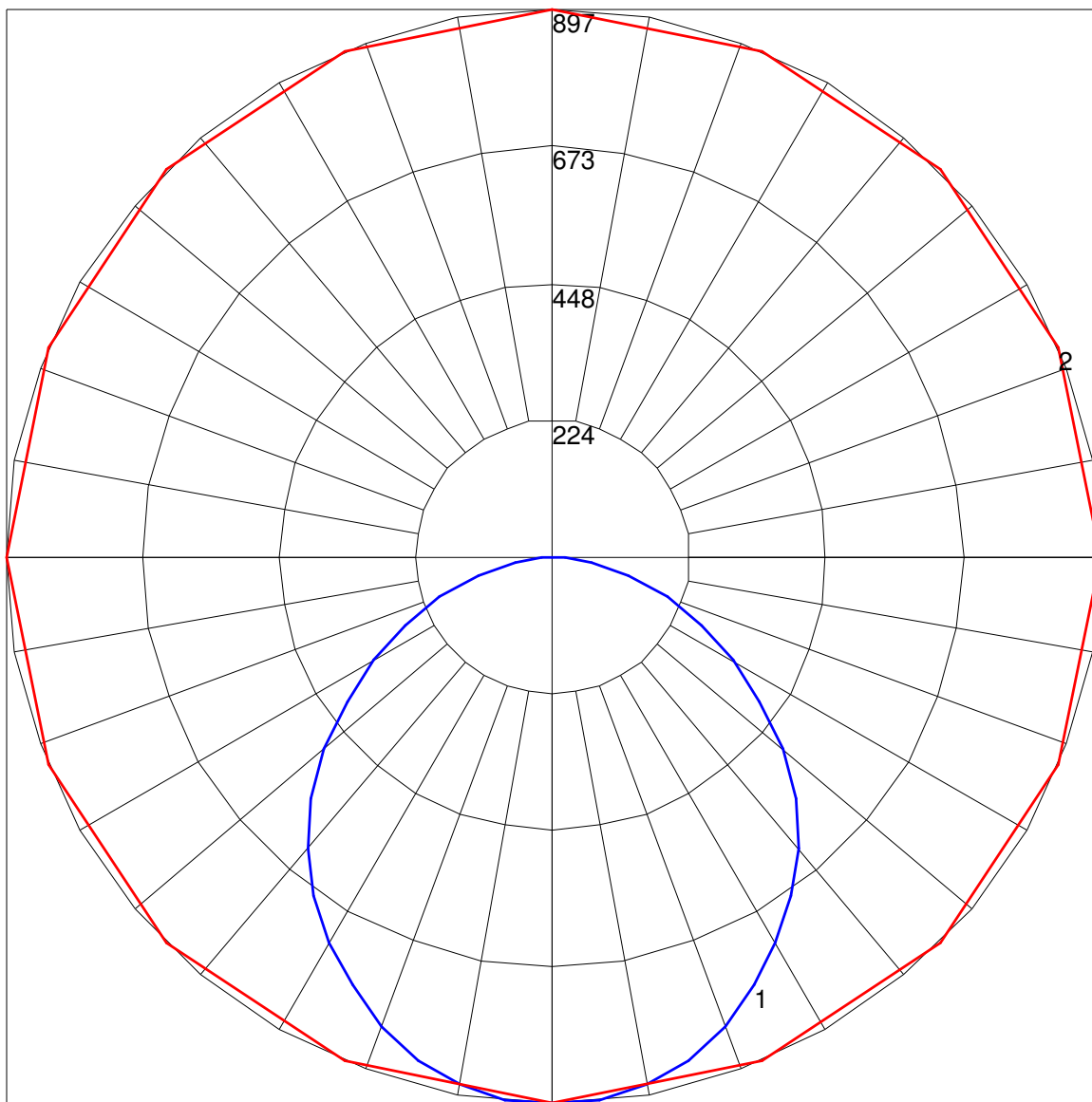
Reflectances

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	14.3	16.0	14.7	16.3	16.6	15.9	17.6	16.3	17.9	18.2
	3H	15.9	17.5	16.3	17.8	18.1	18.5	20.0	18.8	20.3	20.7
	4H	16.5	17.9	16.9	18.3	18.7	19.6	21.1	20.0	21.4	21.8
	6H	16.8	18.2	17.2	18.5	18.9	20.6	21.9	21.0	22.3	22.7
	8H	16.9	18.2	17.3	18.6	19.0	20.9	22.2	21.3	22.6	23.0
	12H	16.9	18.2	17.4	18.5	19.0	21.0	22.3	21.5	22.7	23.1
4H	2H	15.2	16.7	15.6	17.0	17.4	16.5	17.9	16.9	18.3	18.6
	3H	17.1	18.3	17.5	18.7	19.1	19.3	20.5	19.7	20.9	21.3
	4H	17.8	18.9	18.2	19.3	19.8	20.6	21.8	21.1	22.2	22.6
	6H	18.3	19.2	18.7	19.7	20.1	21.8	22.8	22.3	23.3	23.7
	8H	18.4	19.3	18.8	19.7	20.2	22.2	23.1	22.7	23.6	24.0
	12H	18.4	19.3	18.9	19.7	20.2	22.4	23.3	22.9	23.7	24.2
8H	4H	18.5	19.4	19.0	19.9	20.4	20.9	21.9	21.4	22.3	22.8
	6H	19.2	19.9	19.7	20.4	20.9	22.3	23.1	22.8	23.6	24.1
	8H	19.4	20.1	19.9	20.6	21.0	22.9	23.6	23.4	24.1	24.5
	12H	19.5	20.1	20.0	20.6	21.1	23.2	23.8	23.7	24.3	24.9
12H	4H	18.7	19.5	19.2	20.0	20.5	21.0	21.8	21.4	22.3	22.7
	6H	19.4	20.1	20.0	20.6	21.1	22.4	23.1	22.9	23.5	24.1
	8H	19.7	20.3	20.2	20.8	21.4	23.0	23.6	23.5	24.1	24.6

Maximum UGR = 24.9

POLAR GRAPH



Maximum Candela = 896.715 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.)