



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L27-927-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-L27-927-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	2178
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
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	1883	2022	2177
55	1707	1990	2245
65	1504	1971	2433
75	1157	2089	2844
85	503	1697	1656

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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	724.618	724.618	724.618	724.618	724.618
5	723.994	720.874	720.249	717.753	719.625
10	711.512	708.391	710.887	708.391	710.263
15	692.788	691.539	695.284	696.532	698.405
20	662.829	667.198	672.815	679.057	680.305
25	628.502	637.240	645.354	655.340	657.836
30	591.678	601.664	613.523	628.502	633.495
35	551.109	559.847	574.202	596.671	601.664
40	504.924	513.661	533.634	557.351	565.464
45	454.993	463.107	488.696	513.661	526.144
50	396.324	406.935	439.390	464.979	483.079
55	334.535	349.514	390.083	418.169	440.014
60	275.867	292.718	339.528	375.104	396.324
65	217.198	235.298	284.605	332.663	351.387
70	159.778	179.126	234.050	286.477	305.825
75	102.358	126.075	184.743	236.546	251.526
80	50.555	79.265	127.323	174.133	169.140
85	14.979	30.583	50.555	85.506	49.307
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	264.42	N.A.	12.10
0-30	562.02	N.A.	25.80
0-40	922.86	N.A.	42.40
0-60	1645.81	N.A.	75.60
0-80	2117.07	N.A.	97.20
0-90	2177.51	N.A.	100.00
10-90	2109.09	N.A.	96.90
20-40	658.44	N.A.	30.20
20-50	1035.3	N.A.	47.50
40-70	1004.68	N.A.	46.10
60-80	471.26	N.A.	21.60
70-80	189.53	N.A.	8.70
80-90	60.44	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	2177.51	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	68.42
10-20	196.00
20-30	297.60
30-40	360.85
40-50	376.86
50-60	346.08
60-70	281.73
70-80	189.53
80-90	60.44
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

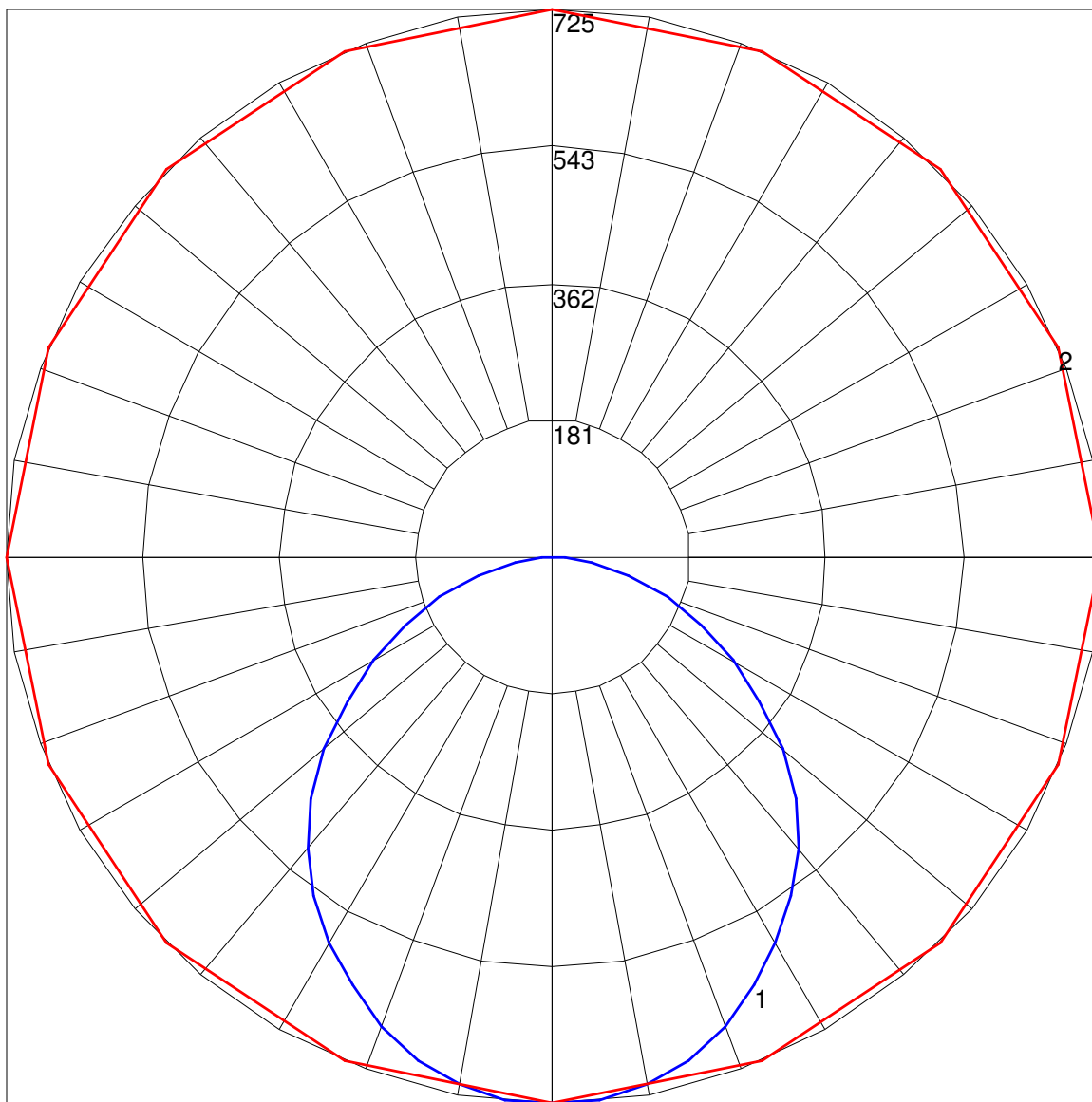
Reflectances

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	13.6	15.3	14.0	15.6	15.9	15.2	16.9	15.6	17.2	17.5
	3H	15.2	16.8	15.6	17.1	17.4	17.8	19.3	18.1	19.6	20.0
	4H	15.8	17.2	16.2	17.6	18.0	18.9	20.4	19.3	20.7	21.1
	6H	16.1	17.5	16.5	17.8	18.2	19.9	21.2	20.3	21.6	22.0
	8H	16.2	17.5	16.6	17.9	18.3	20.2	21.5	20.6	21.9	22.3
	12H	16.2	17.5	16.7	17.8	18.3	20.3	21.6	20.8	22.0	22.4
4H	2H	14.5	16.0	14.9	16.3	16.7	15.8	17.2	16.2	17.6	17.9
	3H	16.4	17.6	16.8	18.0	18.4	18.6	19.8	19.0	20.2	20.6
	4H	17.1	18.2	17.5	18.6	19.1	19.9	21.1	20.4	21.5	21.9
	6H	17.6	18.5	18.0	19.0	19.4	21.1	22.1	21.6	22.6	23.0
	8H	17.7	18.6	18.1	19.0	19.5	21.5	22.4	22.0	22.9	23.3
	12H	17.7	18.6	18.2	19.0	19.5	21.7	22.6	22.2	23.0	23.5
8H	4H	17.8	18.7	18.3	19.2	19.7	20.2	21.2	20.7	21.6	22.1
	6H	18.5	19.2	19.0	19.7	20.2	21.6	22.4	22.1	22.9	23.4
	8H	18.7	19.4	19.2	19.9	20.3	22.2	22.9	22.7	23.4	23.8
	12H	18.8	19.4	19.3	19.9	20.4	22.5	23.1	23.0	23.6	24.2
12H	4H	18.0	18.8	18.5	19.3	19.8	20.3	21.1	20.7	21.6	22.0
	6H	18.7	19.4	19.3	19.9	20.4	21.7	22.4	22.2	22.8	23.4
	8H	19.0	19.6	19.5	20.1	20.7	22.3	22.9	22.8	23.4	23.9

Maximum UGR = 24.2

POLAR GRAPH



Maximum Candela = 724.618 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.)