



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L49-930-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-L49-930-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	3992
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
Total Luminaire Watts	38.1
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	3452	3708	3992
55	3129	3649	4116
65	2757	3613	4461
75	2122	3830	5214
85	922	3112	3035

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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	1328.572	1328.572	1328.572	1328.572	1328.572
5	1327.427	1321.706	1320.561	1315.984	1319.417
10	1304.541	1298.819	1303.396	1298.819	1302.252
15	1270.211	1267.922	1274.788	1277.077	1280.510
20	1215.283	1223.293	1233.592	1245.035	1247.324
25	1152.344	1168.365	1183.241	1201.551	1206.128
30	1084.829	1103.138	1124.880	1152.344	1161.499
35	1010.447	1026.468	1052.787	1093.983	1103.138
40	925.766	941.787	978.406	1021.890	1036.767
45	834.219	849.096	896.013	941.787	964.674
50	726.652	746.106	805.611	852.529	885.714
55	613.363	640.827	715.209	766.704	806.755
60	505.796	536.693	622.518	687.745	726.652
65	398.228	431.414	521.816	609.930	644.260
70	292.949	328.424	429.125	525.249	560.724
75	187.671	231.155	338.723	433.703	461.167
80	92.691	145.330	233.444	319.269	310.115
85	27.464	56.072	92.691	156.774	90.402
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	484.81	N.A.	12.10
0-30	1030.45	N.A.	25.80
0-40	1692.05	N.A.	42.40
0-60	3017.55	N.A.	75.60
0-80	3881.6	N.A.	97.20
0-90	3992.41	N.A.	100.00
10-90	3866.96	N.A.	96.90
20-40	1207.24	N.A.	30.20
20-50	1898.21	N.A.	47.50
40-70	1842.05	N.A.	46.10
60-80	864.05	N.A.	21.60
70-80	347.50	N.A.	8.70
80-90	110.81	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	3992.41	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	125.45
10-20	359.36
20-30	545.64
30-40	661.60
40-50	690.97
50-60	634.54
60-70	516.55
70-80	347.50
80-90	110.81
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	90	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

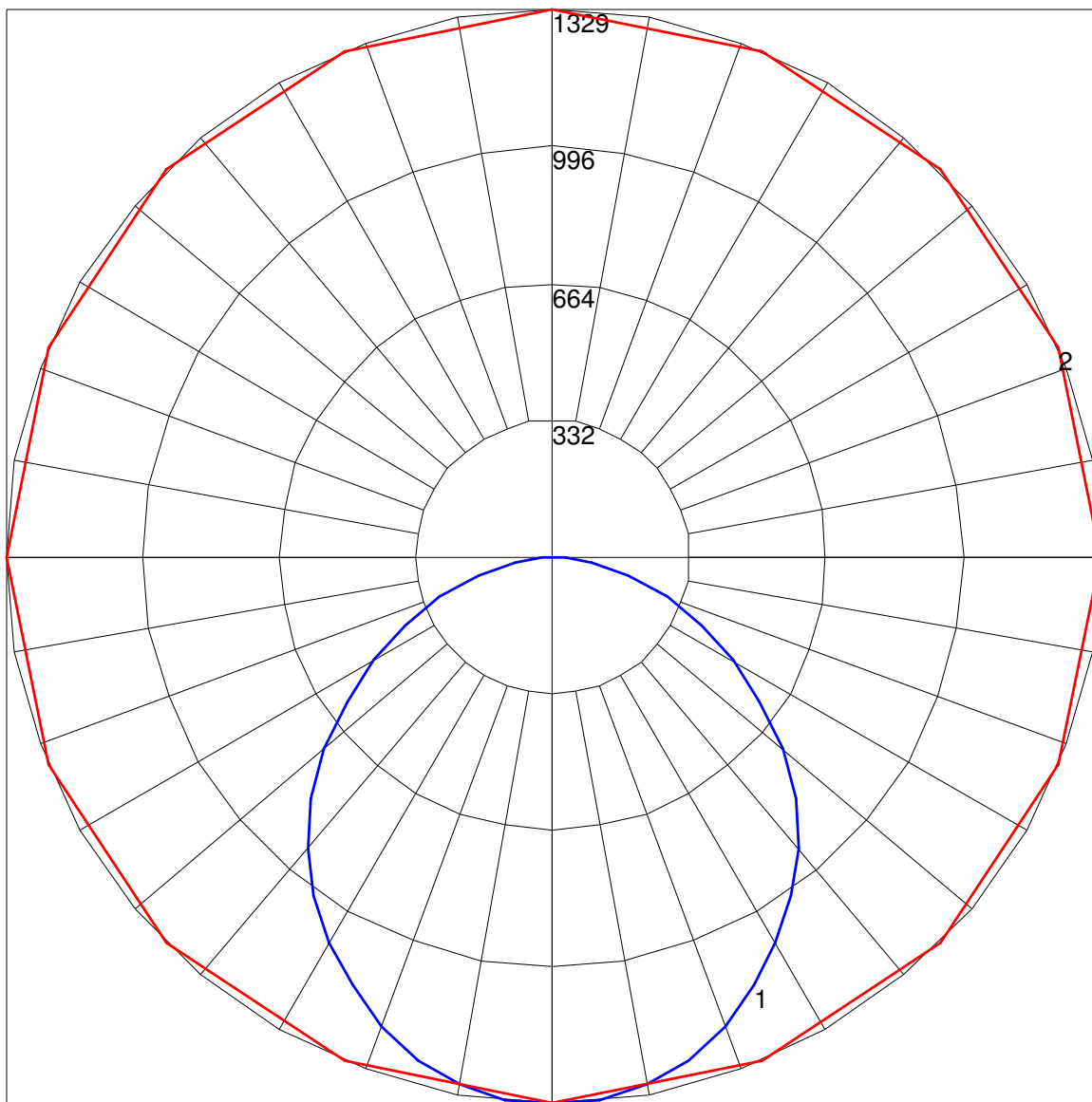
Reflectances

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	15.7	17.4	16.1	17.7	18.0	17.3	19.0	17.7	19.3	19.6
	3H	17.3	18.9	17.7	19.2	19.5	19.9	21.4	20.2	21.7	22.1
	4H	17.9	19.3	18.3	19.7	20.1	21.0	22.5	21.4	22.8	23.2
	6H	18.2	19.6	18.6	19.9	20.3	22.0	23.3	22.4	23.7	24.1
	8H	18.3	19.6	18.7	20.0	20.4	22.3	23.6	22.7	24.0	24.4
	12H	18.3	19.6	18.8	19.9	20.4	22.4	23.7	22.9	24.1	24.5
4H	2H	16.6	18.1	17.0	18.4	18.8	17.9	19.3	18.3	19.7	20.0
	3H	18.5	19.7	18.9	20.1	20.5	20.7	21.9	21.1	22.3	22.7
	4H	19.2	20.3	19.6	20.7	21.2	22.0	23.2	22.5	23.6	24.0
	6H	19.7	20.6	20.1	21.1	21.5	23.2	24.2	23.7	24.7	25.1
	8H	19.8	20.7	20.2	21.1	21.6	23.6	24.5	24.1	25.0	25.4
	12H	19.8	20.7	20.3	21.1	21.6	23.8	24.7	24.3	25.1	25.6
8H	4H	19.9	20.9	20.4	21.3	21.8	22.3	23.3	22.8	23.7	24.2
	6H	20.6	21.3	21.1	21.8	22.3	23.7	24.5	24.2	25.0	25.5
	8H	20.8	21.5	21.3	22.0	22.4	24.3	25.0	24.8	25.5	25.9
	12H	20.9	21.5	21.4	22.0	22.5	24.6	25.2	25.1	25.7	26.3
12H	4H	20.1	20.9	20.6	21.4	21.9	22.4	23.2	22.8	23.7	24.1
	6H	20.9	21.5	21.4	22.0	22.5	23.8	24.5	24.3	24.9	25.5
	8H	21.1	21.7	21.6	22.2	22.8	24.4	25.0	24.9	25.5	26.0

Maximum UGR = 26.3

POLAR GRAPH



Maximum Candela = 1328.572 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.)