



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L39-940-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-L39-940-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	3383
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
Total Luminaire Watts	33.1
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	2925	3142	3383
55	2652	3092	3488
65	2337	3062	3780
75	1798	3245	4418
85	781	2637	2572

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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	1125.807	1125.807	1125.807	1125.807	1125.807
5	1124.838	1119.989	1119.019	1115.141	1118.050
10	1105.444	1100.595	1104.474	1100.595	1103.504
15	1076.353	1074.414	1080.232	1082.171	1085.080
20	1029.808	1036.596	1045.323	1055.020	1056.959
25	976.475	990.051	1002.657	1018.172	1022.051
30	919.264	934.779	953.203	976.475	984.233
35	856.234	869.810	892.113	927.021	934.779
40	784.477	798.053	829.083	865.931	878.537
45	706.902	719.508	759.265	798.053	817.447
50	615.752	632.236	682.660	722.417	750.538
55	519.753	543.025	606.055	649.691	683.630
60	428.602	454.783	527.510	582.782	615.752
65	337.451	365.572	442.178	516.843	545.934
70	248.240	278.300	363.633	445.087	475.147
75	159.029	195.877	287.028	367.512	390.784
80	78.545	123.150	197.816	270.543	262.785
85	23.273	47.515	78.545	132.847	76.605
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	410.82	N.A.	12.10
0-30	873.18	N.A.	25.80
0-40	1433.81	N.A.	42.40
0-60	2557.02	N.A.	75.60
0-80	3289.2	N.A.	97.20
0-90	3383.1	N.A.	100.00
10-90	3276.79	N.A.	96.90
20-40	1022.99	N.A.	30.20
20-50	1608.51	N.A.	47.50
40-70	1560.92	N.A.	46.10
60-80	732.18	N.A.	21.60
70-80	294.46	N.A.	8.70
80-90	93.90	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	3383.1	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	106.30
10-20	304.52
20-30	462.36
30-40	560.63
40-50	585.51
50-60	537.70
60-70	437.72
70-80	294.46
80-90	93.90
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

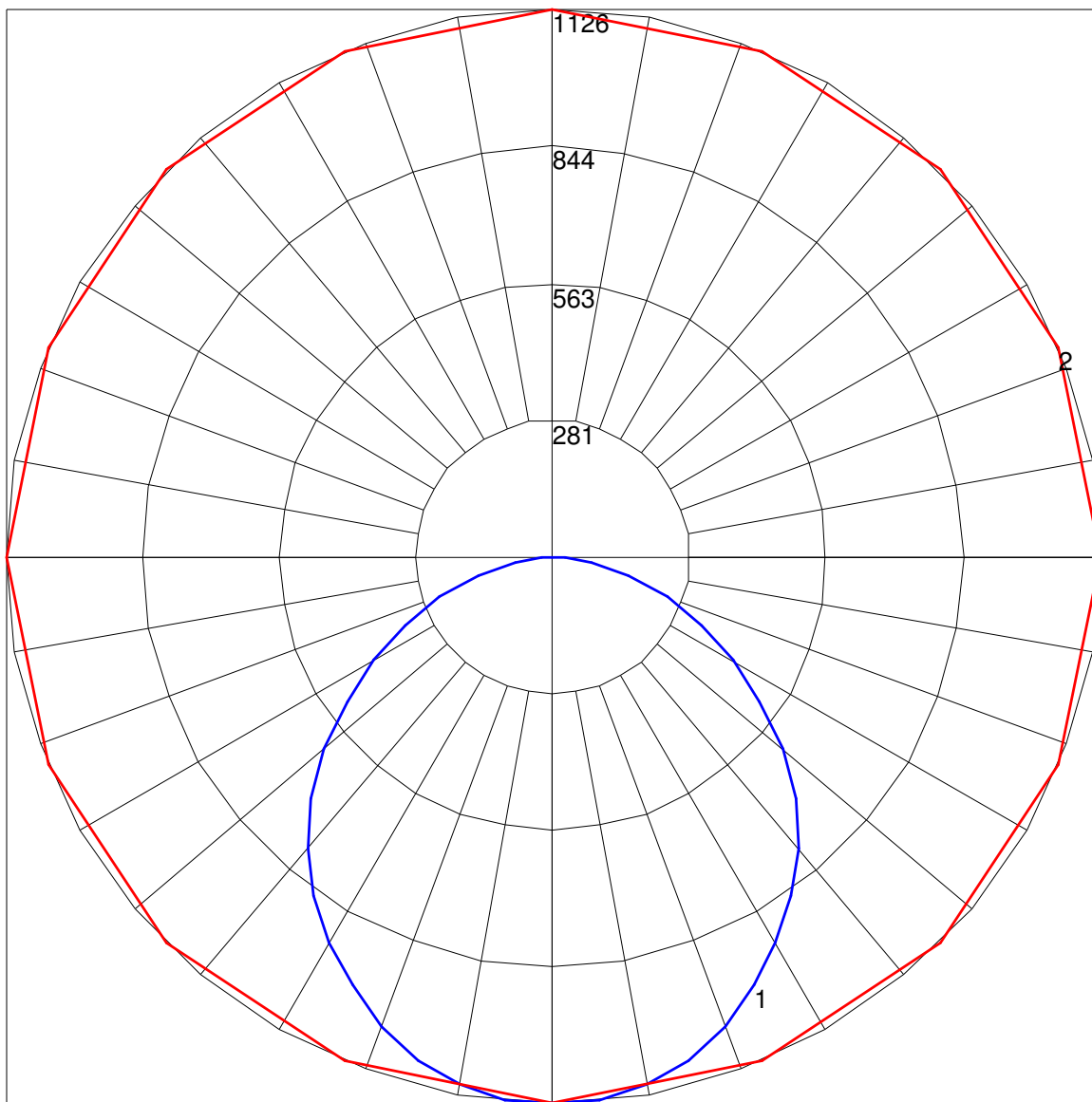
Reflectances

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	15.1	16.8	15.5	17.1	17.4	16.7	18.4	17.1	18.7	19.0
	3H	16.7	18.3	17.1	18.6	18.9	19.3	20.8	19.6	21.1	21.5
	4H	17.3	18.7	17.7	19.1	19.5	20.4	21.9	20.8	22.2	22.6
	6H	17.6	19.0	18.0	19.3	19.7	21.4	22.7	21.8	23.1	23.5
	8H	17.7	19.0	18.1	19.4	19.8	21.7	23.0	22.1	23.4	23.8
	12H	17.7	19.0	18.2	19.3	19.8	21.8	23.1	22.3	23.5	23.9
4H	2H	16.0	17.5	16.4	17.8	18.2	17.3	18.7	17.7	19.1	19.4
	3H	17.9	19.1	18.3	19.5	19.9	20.1	21.3	20.5	21.7	22.1
	4H	18.6	19.7	19.0	20.1	20.6	21.4	22.6	21.9	23.0	23.4
	6H	19.1	20.0	19.5	20.5	20.9	22.6	23.6	23.1	24.1	24.5
	8H	19.2	20.1	19.6	20.5	21.0	23.0	23.9	23.5	24.4	24.8
	12H	19.2	20.1	19.7	20.5	21.0	23.2	24.1	23.7	24.5	25.0
8H	4H	19.3	20.3	19.8	20.7	21.2	21.7	22.7	22.2	23.1	23.6
	6H	20.0	20.7	20.5	21.2	21.7	23.1	23.9	23.6	24.4	24.9
	8H	20.2	20.9	20.7	21.4	21.8	23.7	24.4	24.2	24.9	25.3
	12H	20.3	20.9	20.8	21.4	21.9	24.0	24.6	24.5	25.1	25.7
12H	4H	19.5	20.3	20.0	20.8	21.3	21.8	22.6	22.2	23.1	23.5
	6H	20.3	20.9	20.8	21.4	21.9	23.2	23.9	23.7	24.3	24.9
	8H	20.5	21.1	21.0	21.6	22.2	23.8	24.4	24.3	24.9	25.4

Maximum UGR = 25.7

POLAR GRAPH



Maximum Candela = 1125.807 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.)