



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L39-840-AF-EM10W-DIM1-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] 03-06-2024
[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-L39-840-AF-EM10W-DIM1-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	1220
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
Total Luminaire Watts	10
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	1055	1133	1220
55	956	1115	1258
65	843	1104	1363
75	648	1170	1593
85	282	951	927

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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	405.967	405.967	405.967	405.967	405.967
5	405.618	403.869	403.520	402.121	403.170
10	398.624	396.876	398.275	396.876	397.925
15	388.134	387.435	389.533	390.232	391.281
20	371.350	373.798	376.945	380.441	381.141
25	352.118	357.013	361.559	367.154	368.553
30	331.488	337.082	343.726	352.118	354.915
35	308.759	313.654	321.697	334.285	337.082
40	282.883	287.779	298.968	312.256	316.801
45	254.910	259.455	273.792	287.779	294.772
50	222.041	227.985	246.168	260.504	270.645
55	187.423	195.815	218.544	234.279	246.518
60	154.554	163.995	190.221	210.152	222.041
65	121.685	131.826	159.450	186.374	196.864
70	89.516	100.355	131.126	160.499	171.339
75	57.346	70.633	103.502	132.525	140.917
80	28.323	44.408	71.333	97.558	94.761
85	8.392	17.134	28.323	47.905	27.624
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	148.14	N.A.	12.10
0-30	314.87	N.A.	25.80
0-40	517.03	N.A.	42.40
0-60	922.06	N.A.	75.60
0-80	1186.09	N.A.	97.20
0-90	1219.95	N.A.	100.00
10-90	1181.61	N.A.	96.90
20-40	368.89	N.A.	30.20
20-50	580.03	N.A.	47.50
40-70	562.87	N.A.	46.10
60-80	264.02	N.A.	21.60
70-80	106.18	N.A.	8.70
80-90	33.86	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	1219.95	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	38.33
10-20	109.81
20-30	166.73
30-40	202.16
40-50	211.14
50-60	193.89
60-70	157.84
70-80	106.18
80-90	33.86
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

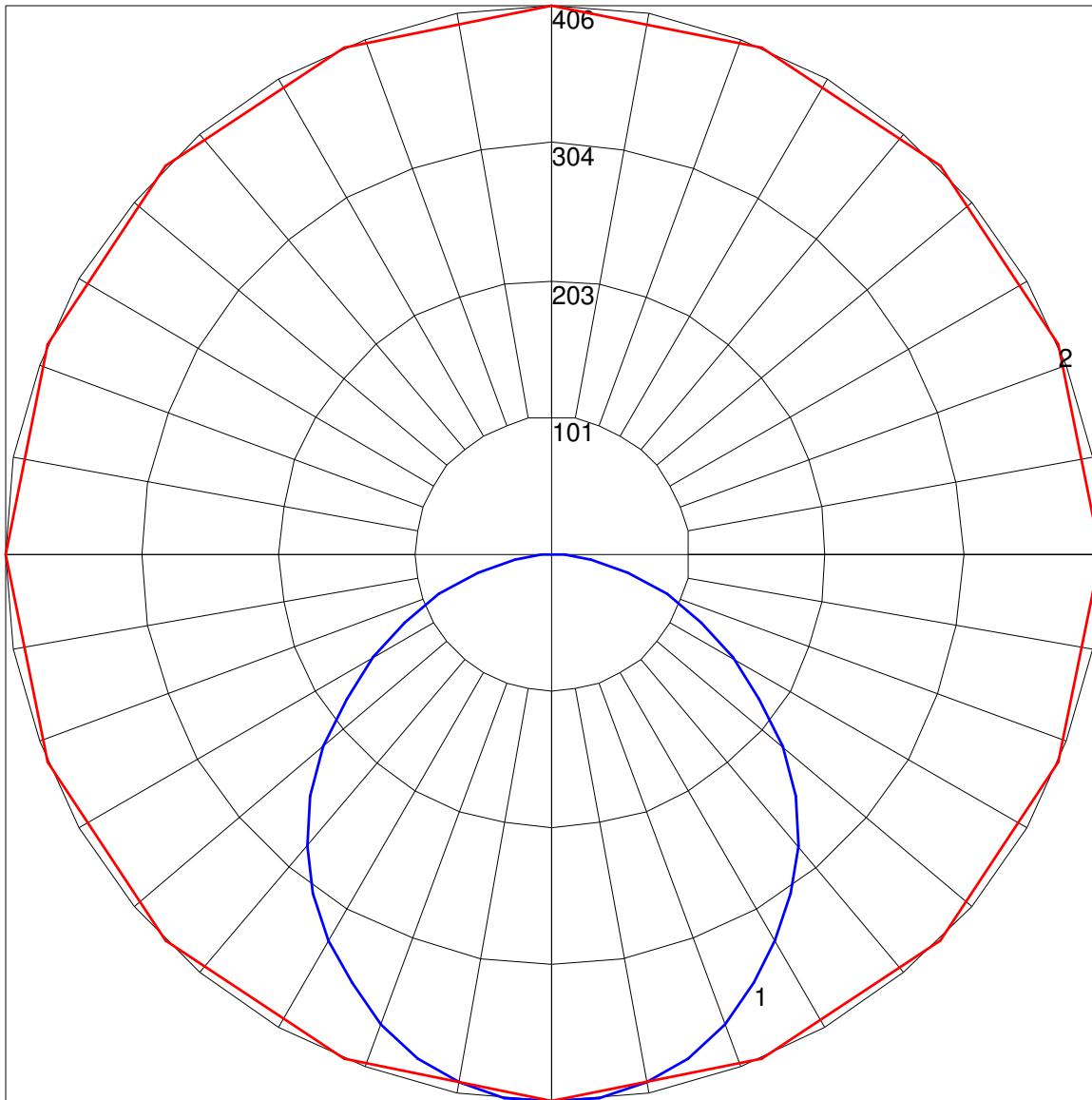
Reflectances

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	11.6	13.3	12.0	13.6	13.9	13.2	14.9	13.6	15.2	15.5
	3H	13.2	14.8	13.6	15.1	15.4	15.8	17.3	16.1	17.6	18.0
	4H	13.8	15.2	14.2	15.6	15.9	16.9	18.4	17.3	18.7	19.1
	6H	14.1	15.5	14.5	15.8	16.2	17.9	19.2	18.3	19.6	20.0
	8H	14.2	15.5	14.6	15.9	16.3	18.2	19.5	18.6	19.9	20.3
	12H	14.2	15.5	14.7	15.8	16.3	18.3	19.6	18.8	20.0	20.4
4H	2H	12.5	14.0	12.9	14.3	14.7	13.8	15.2	14.2	15.6	15.9
	3H	14.4	15.6	14.8	16.0	16.4	16.6	17.8	17.0	18.2	18.6
	4H	15.1	16.2	15.5	16.6	17.0	17.9	19.1	18.4	19.5	19.9
	6H	15.6	16.5	16.0	17.0	17.4	19.1	20.1	19.6	20.5	21.0
	8H	15.7	16.6	16.1	17.0	17.5	19.5	20.4	20.0	20.9	21.3
	12H	15.7	16.6	16.2	17.0	17.5	19.7	20.6	20.2	21.0	21.5
8H	4H	15.8	16.7	16.3	17.2	17.7	18.2	19.2	18.7	19.6	20.1
	6H	16.5	17.2	17.0	17.7	18.2	19.6	20.4	20.1	20.9	21.4
	8H	16.7	17.4	17.2	17.9	18.3	20.2	20.8	20.7	21.4	21.8
	12H	16.8	17.4	17.3	17.9	18.4	20.5	21.1	21.0	21.6	22.2
12H	4H	16.0	16.8	16.5	17.3	17.8	18.3	19.1	18.7	19.6	20.0
	6H	16.7	17.4	17.3	17.9	18.4	19.7	20.4	20.2	20.8	21.4
	8H	17.0	17.6	17.5	18.1	18.7	20.3	20.9	20.8	21.4	21.9

Maximum UGR = 22.2

POLAR GRAPH



Maximum Candela = 405.967 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.)