



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L39-950-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-L39-950-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	3501
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
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	3028	3252	3501
55	2744	3200	3609
65	2418	3169	3912
75	1861	3358	4572
85	809	2729	2662

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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	1165.080	1165.080	1165.080	1165.080	1165.080
5	1164.076	1159.059	1158.055	1154.041	1157.052
10	1144.006	1138.988	1143.003	1138.988	1141.999
15	1113.901	1111.894	1117.915	1119.922	1122.932
20	1065.732	1072.757	1081.788	1091.823	1093.830
25	1010.539	1024.588	1037.634	1053.690	1057.704
30	951.331	967.388	986.454	1010.539	1018.567
35	886.103	900.152	923.233	959.359	967.388
40	811.843	825.892	858.005	896.138	909.184
45	731.562	744.607	785.752	825.892	845.962
50	637.231	654.291	706.474	747.618	776.720
55	537.884	561.968	627.196	672.354	707.477
60	443.553	470.648	545.912	603.112	637.231
65	349.223	378.325	457.602	534.873	564.978
70	256.900	288.009	376.318	460.613	491.722
75	164.576	202.710	297.040	380.332	404.416
80	81.285	127.446	204.717	279.980	271.952
85	24.084	49.172	81.285	137.481	79.278
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	425.15	N.A.	12.10
0-30	903.64	N.A.	25.80
0-40	1483.83	N.A.	42.40
0-60	2646.22	N.A.	75.60
0-80	3403.94	N.A.	97.20
0-90	3501.11	N.A.	100.00
10-90	3391.1	N.A.	96.90
20-40	1058.68	N.A.	30.20
20-50	1664.62	N.A.	47.50
40-70	1615.37	N.A.	46.10
60-80	757.72	N.A.	21.60
70-80	304.74	N.A.	8.70
80-90	97.17	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	3501.11	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	110.01
10-20	315.14
20-30	478.49
30-40	580.19
40-50	605.94
50-60	556.45
60-70	452.98
70-80	304.74
80-90	97.17
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

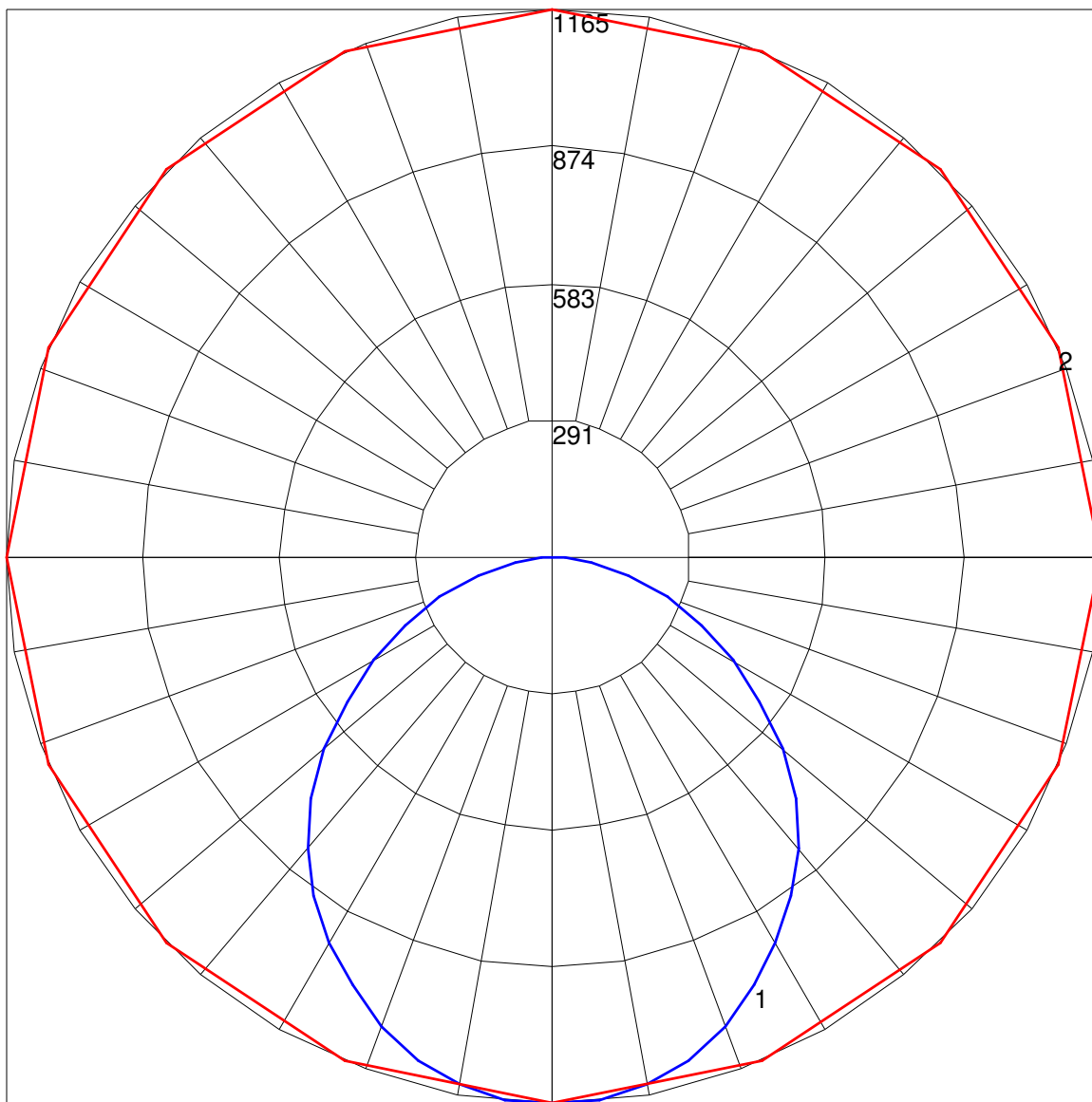
Reflectances

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	15.3	17.0	15.7	17.3	17.6	16.9	18.6	17.3	18.9	19.2
	3H	16.9	18.5	17.3	18.8	19.1	19.5	21.0	19.8	21.3	21.7
	4H	17.5	18.9	17.9	19.3	19.7	20.6	22.1	21.0	22.4	22.8
	6H	17.8	19.2	18.2	19.5	19.9	21.6	22.9	22.0	23.3	23.7
	8H	17.9	19.2	18.3	19.6	20.0	21.9	23.2	22.3	23.6	24.0
	12H	17.9	19.2	18.4	19.5	20.0	22.0	23.3	22.5	23.7	24.1
4H	2H	16.2	17.7	16.6	18.0	18.4	17.5	18.9	17.9	19.3	19.6
	3H	18.1	19.3	18.5	19.7	20.1	20.3	21.5	20.7	21.9	22.3
	4H	18.8	19.9	19.2	20.3	20.8	21.6	22.8	22.1	23.2	23.6
	6H	19.3	20.2	19.7	20.7	21.1	22.8	23.8	23.3	24.3	24.7
	8H	19.4	20.3	19.8	20.7	21.2	23.2	24.1	23.7	24.6	25.0
	12H	19.4	20.3	19.9	20.7	21.2	23.4	24.3	23.9	24.7	25.2
8H	4H	19.5	20.5	20.0	20.9	21.4	21.9	22.9	22.4	23.3	23.8
	6H	20.2	20.9	20.7	21.4	21.9	23.3	24.1	23.8	24.6	25.1
	8H	20.4	21.1	20.9	21.6	22.0	23.9	24.6	24.4	25.1	25.5
	12H	20.5	21.1	21.0	21.6	22.1	24.2	24.8	24.7	25.3	25.9
12H	4H	19.7	20.5	20.2	21.0	21.5	22.0	22.8	22.4	23.3	23.7
	6H	20.5	21.1	21.0	21.6	22.1	23.4	24.1	23.9	24.5	25.1
	8H	20.7	21.3	21.2	21.8	22.4	24.0	24.6	24.5	25.1	25.6

Maximum UGR = 25.9

POLAR GRAPH



Maximum Candela = 1165.08 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.)