



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L27-850-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-L27-850-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	2885
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	135
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	2495	2680	2885
55	2261	2637	2974
65	1993	2611	3224
75	1533	2768	3768
85	666	2249	2194

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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	960.119	960.119	960.119	960.119	960.119
5	959.292	955.157	954.331	951.023	953.504
10	942.753	938.618	941.926	938.618	941.099
15	917.944	916.290	921.251	922.905	925.386
20	878.249	884.038	891.480	899.750	901.404
25	832.765	844.343	855.093	868.325	871.633
30	783.973	797.205	812.918	832.765	839.381
35	730.220	741.798	760.818	790.589	797.205
40	669.024	680.601	707.065	738.490	749.240
45	602.866	613.616	647.522	680.601	697.141
50	525.130	539.188	582.191	616.097	640.080
55	443.259	463.107	516.860	554.074	583.018
60	365.523	387.852	449.875	497.013	525.130
65	287.788	311.770	377.101	440.778	465.588
70	211.706	237.342	310.116	379.582	405.218
75	135.624	167.049	244.785	313.424	333.271
80	66.985	105.026	168.703	230.726	224.111
85	19.847	40.522	66.985	113.296	65.331
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	350.36	N.A.	12.10
0-30	744.67	N.A.	25.80
0-40	1222.79	N.A.	42.40
0-60	2180.7	N.A.	75.60
0-80	2805.12	N.A.	97.20
0-90	2885.2	N.A.	100.00
10-90	2794.54	N.A.	96.90
20-40	872.44	N.A.	30.20
20-50	1371.78	N.A.	47.50
40-70	1331.2	N.A.	46.10
60-80	624.42	N.A.	21.60
70-80	251.13	N.A.	8.70
80-90	80.08	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	2885.2	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	90.66
10-20	259.70
20-30	394.32
30-40	478.12
40-50	499.34
50-60	458.56
60-70	373.30
70-80	251.13
80-90	80.08
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

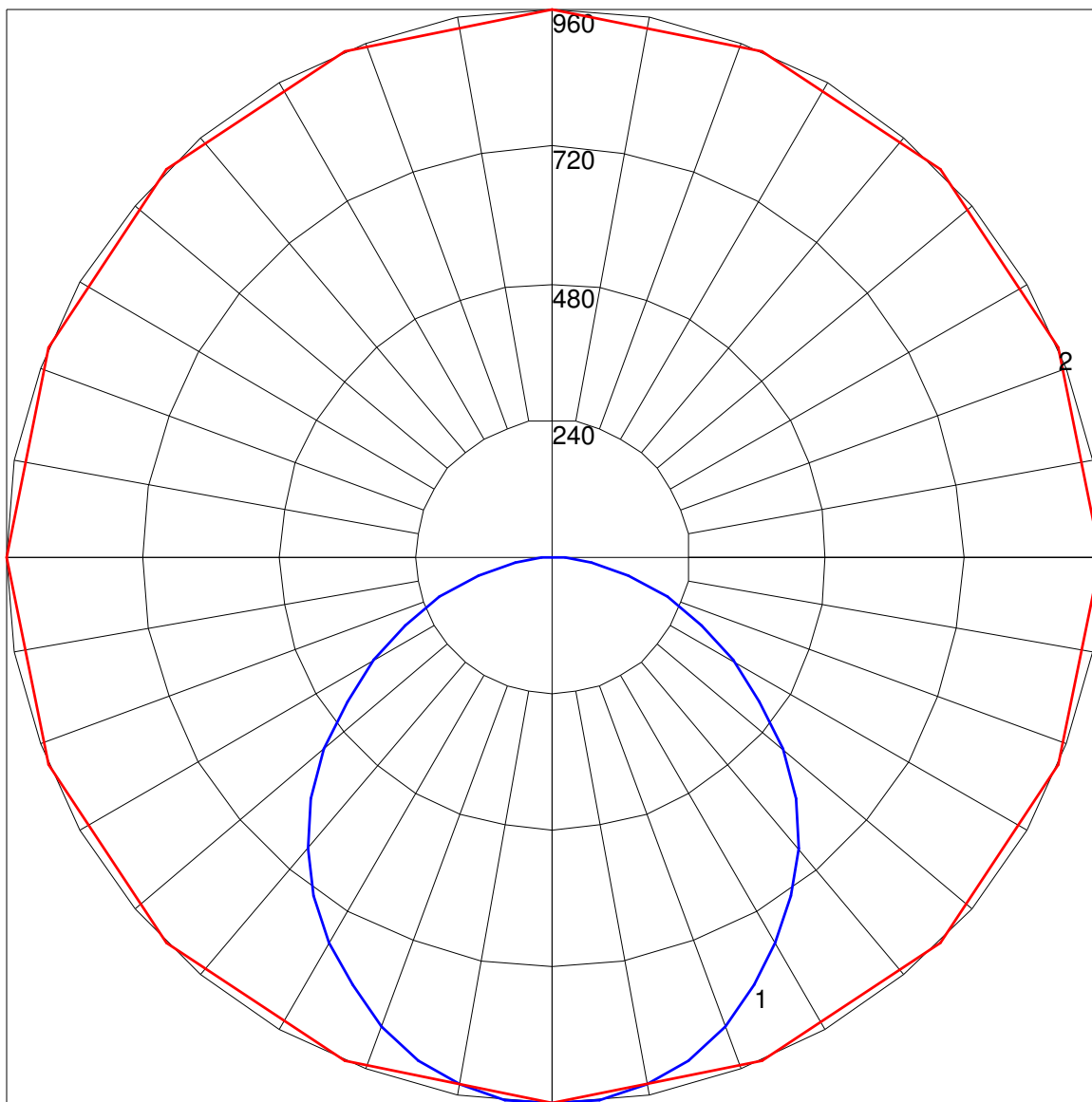
Reflectances

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	14.6	16.3	15.0	16.6	16.9	16.2	17.9	16.6	18.2	18.5
	3H	16.2	17.8	16.6	18.1	18.4	18.8	20.3	19.1	20.6	21.0
	4H	16.8	18.2	17.2	18.6	19.0	19.9	21.4	20.3	21.7	22.1
	6H	17.1	18.5	17.5	18.8	19.2	20.9	22.2	21.3	22.6	23.0
	8H	17.2	18.5	17.6	18.9	19.3	21.2	22.5	21.6	22.9	23.3
	12H	17.2	18.5	17.7	18.8	19.3	21.3	22.6	21.8	23.0	23.4
4H	2H	15.5	17.0	15.9	17.3	17.7	16.8	18.2	17.2	18.6	18.9
	3H	17.4	18.6	17.8	19.0	19.4	19.6	20.8	20.0	21.2	21.6
	4H	18.1	19.2	18.5	19.6	20.1	20.9	22.1	21.4	22.5	22.9
	6H	18.6	19.5	19.0	20.0	20.4	22.1	23.1	22.6	23.6	24.0
	8H	18.7	19.6	19.1	20.0	20.5	22.5	23.4	23.0	23.9	24.3
	12H	18.7	19.6	19.2	20.0	20.5	22.7	23.6	23.2	24.0	24.5
8H	4H	18.8	19.7	19.3	20.2	20.7	21.2	22.2	21.7	22.6	23.1
	6H	19.5	20.2	20.0	20.7	21.2	22.6	23.4	23.1	23.9	24.4
	8H	19.7	20.4	20.2	20.9	21.3	23.2	23.9	23.7	24.4	24.8
	12H	19.8	20.4	20.3	20.9	21.4	23.5	24.1	24.0	24.6	25.2
12H	4H	19.0	19.8	19.5	20.3	20.8	21.3	22.1	21.7	22.6	23.0
	6H	19.7	20.4	20.3	20.9	21.4	22.7	23.4	23.2	23.8	24.4
	8H	20.0	20.6	20.5	21.1	21.7	23.3	23.9	23.8	24.4	24.9

Maximum UGR = 25.2

POLAR GRAPH



Maximum Candela = 960.119 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.)