



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L27-835-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-L27-835-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	2722
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
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	2354	2528	2722
55	2133	2488	2806
65	1880	2463	3041
75	1447	2611	3555
85	629	2122	2069

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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	905.773	905.773	905.773	905.773	905.773
5	904.993	901.092	900.312	897.191	899.532
10	889.389	885.489	888.609	885.489	887.829
15	865.984	864.424	869.105	870.665	873.006
20	828.537	833.998	841.019	848.821	850.381
25	785.627	796.550	806.692	819.175	822.295
30	739.598	752.080	766.903	785.627	791.869
35	688.887	699.809	717.753	745.839	752.080
40	631.154	642.077	667.042	696.688	706.831
45	568.741	578.883	610.870	642.077	657.680
50	495.406	508.668	549.237	581.224	603.849
55	418.169	436.893	487.604	522.711	550.017
60	344.833	365.898	424.410	468.880	495.406
65	271.498	294.123	355.756	415.829	439.234
70	199.723	223.908	292.562	358.096	382.281
75	127.947	157.594	230.929	295.683	314.407
80	63.193	99.081	159.154	217.666	211.425
85	18.724	38.228	63.193	106.883	61.633
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	330.53	N.A.	12.10
0-30	702.52	N.A.	25.80
0-40	1153.58	N.A.	42.40
0-60	2057.26	N.A.	75.60
0-80	2646.34	N.A.	97.20
0-90	2721.88	N.A.	100.00
10-90	2636.36	N.A.	96.90
20-40	823.05	N.A.	30.20
20-50	1294.13	N.A.	47.50
40-70	1255.85	N.A.	46.10
60-80	589.08	N.A.	21.60
70-80	236.91	N.A.	8.70
80-90	75.54	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	2721.88	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	85.53
10-20	245.00
20-30	372.00
30-40	451.06
40-50	471.08
50-60	432.60
60-70	352.17
70-80	236.91
80-90	75.54
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

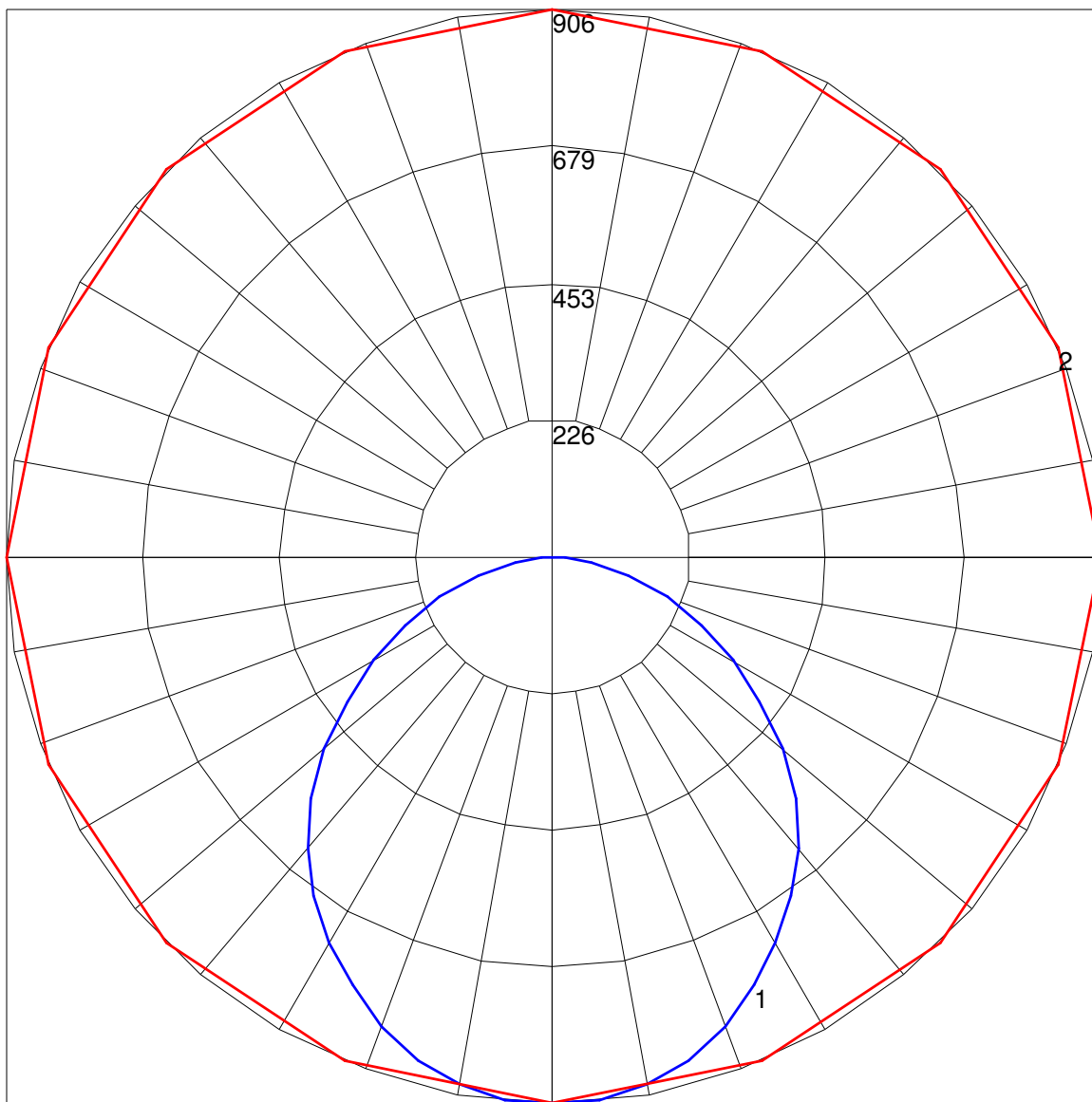
Reflectances

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	14.4	16.1	14.8	16.4	16.7	16.0	17.7	16.4	18.0	18.3
	3H	16.0	17.6	16.4	17.9	18.2	18.6	20.1	18.9	20.4	20.8
	4H	16.6	18.0	17.0	18.4	18.8	19.7	21.2	20.1	21.5	21.9
	6H	16.9	18.3	17.3	18.6	19.0	20.7	22.0	21.1	22.4	22.8
	8H	17.0	18.3	17.4	18.7	19.1	21.0	22.3	21.4	22.7	23.1
	12H	17.0	18.3	17.5	18.6	19.1	21.1	22.4	21.6	22.8	23.2
4H	2H	15.3	16.8	15.7	17.1	17.5	16.6	18.0	17.0	18.4	18.7
	3H	17.2	18.4	17.6	18.8	19.2	19.4	20.6	19.8	21.0	21.4
	4H	17.9	19.0	18.3	19.4	19.9	20.7	21.9	21.2	22.3	22.7
	6H	18.4	19.3	18.8	19.8	20.2	21.9	22.9	22.4	23.4	23.8
	8H	18.5	19.4	18.9	19.8	20.3	22.3	23.2	22.8	23.7	24.1
	12H	18.5	19.4	19.0	19.8	20.3	22.5	23.4	23.0	23.8	24.3
8H	4H	18.6	19.6	19.1	20.0	20.5	21.0	22.0	21.5	22.4	22.9
	6H	19.3	20.0	19.8	20.5	21.0	22.4	23.2	22.9	23.7	24.2
	8H	19.5	20.2	20.0	20.7	21.1	23.0	23.7	23.5	24.2	24.6
	12H	19.6	20.2	20.1	20.7	21.2	23.3	23.9	23.8	24.4	25.0
12H	4H	18.8	19.6	19.3	20.1	20.6	21.1	21.9	21.5	22.4	22.8
	6H	19.6	20.2	20.1	20.7	21.2	22.5	23.2	23.0	23.6	24.2
	8H	19.8	20.4	20.3	20.9	21.5	23.1	23.7	23.6	24.2	24.7

Maximum UGR = 25.0

POLAR GRAPH



Maximum Candela = 905.773 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.)