



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-L27-935-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-L27-935-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	2259
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
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	1954	2098	2259
55	1771	2065	2329
65	1560	2045	2524
75	1201	2167	2950
85	522	1761	1718

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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	751.791	751.791	751.791	751.791	751.791
5	751.144	747.906	747.259	744.669	746.611
10	738.193	734.956	737.546	734.956	736.898
15	718.767	717.472	721.357	722.652	724.595
20	687.685	692.218	698.046	704.521	705.816
25	652.071	661.136	669.554	679.915	682.505
30	613.866	624.227	636.530	652.071	657.251
35	571.776	580.841	595.735	619.046	624.227
40	523.858	532.924	553.645	578.251	586.669
45	472.055	480.473	507.022	532.924	545.874
50	411.187	422.195	455.867	482.416	501.194
55	347.080	362.621	404.711	433.850	456.514
60	286.212	303.695	352.261	389.170	411.187
65	225.343	244.122	295.277	345.138	364.564
70	165.770	185.843	242.827	297.220	317.294
75	106.196	130.803	191.671	245.417	260.958
80	52.451	82.237	132.098	180.663	175.483
85	15.541	31.729	52.451	88.713	51.155
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	274.34	N.A.	12.10
0-30	583.09	N.A.	25.80
0-40	957.47	N.A.	42.40
0-60	1707.53	N.A.	75.60
0-80	2196.46	N.A.	97.20
0-90	2259.16	N.A.	100.00
10-90	2188.18	N.A.	96.90
20-40	683.14	N.A.	30.20
20-50	1074.13	N.A.	47.50
40-70	1042.35	N.A.	46.10
60-80	488.93	N.A.	21.60
70-80	196.64	N.A.	8.70
80-90	62.70	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	2259.16	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	70.99
10-20	203.35
20-30	308.76
30-40	374.38
40-50	390.99
50-60	359.06
60-70	292.30
70-80	196.64
80-90	62.70
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

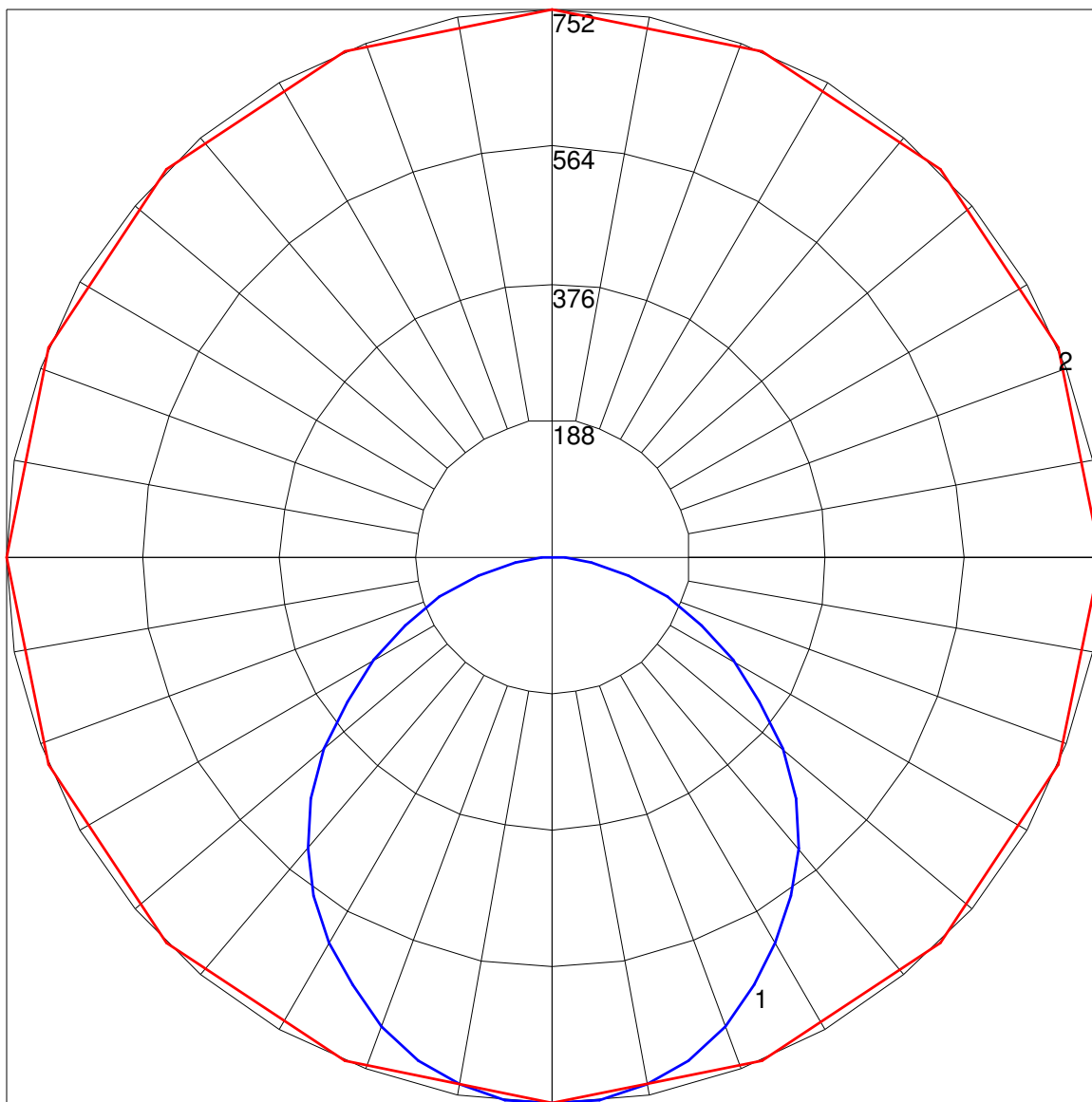
Reflectances

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	13.7	15.4	14.1	15.7	16.0	15.3	17.0	15.7	17.3	17.6
	3H	15.3	16.9	15.7	17.2	17.5	17.9	19.4	18.2	19.7	20.1
	4H	15.9	17.3	16.3	17.7	18.1	19.0	20.5	19.4	20.8	21.2
	6H	16.2	17.6	16.6	17.9	18.3	20.0	21.3	20.4	21.7	22.1
	8H	16.3	17.6	16.7	18.0	18.4	20.3	21.6	20.7	22.0	22.4
	12H	16.3	17.6	16.8	17.9	18.4	20.4	21.7	20.9	22.1	22.5
4H	2H	14.6	16.1	15.0	16.4	16.8	15.9	17.3	16.3	17.7	18.0
	3H	16.5	17.7	16.9	18.1	18.5	18.7	19.9	19.1	20.3	20.7
	4H	17.2	18.3	17.6	18.7	19.2	20.0	21.2	20.5	21.6	22.0
	6H	17.7	18.6	18.1	19.1	19.5	21.2	22.2	21.7	22.7	23.1
	8H	17.8	18.7	18.2	19.1	19.6	21.6	22.5	22.1	23.0	23.4
	12H	17.8	18.7	18.3	19.1	19.6	21.8	22.7	22.3	23.1	23.6
8H	4H	17.9	18.8	18.4	19.3	19.8	20.3	21.3	20.8	21.7	22.2
	6H	18.6	19.3	19.1	19.8	20.3	21.7	22.5	22.2	23.0	23.5
	8H	18.8	19.5	19.3	20.0	20.4	22.3	23.0	22.8	23.5	23.9
	12H	18.9	19.5	19.4	20.0	20.5	22.6	23.2	23.1	23.7	24.3
12H	4H	18.1	18.9	18.6	19.4	19.9	20.4	21.2	20.8	21.7	22.1
	6H	18.8	19.5	19.4	20.0	20.5	21.8	22.5	22.3	22.9	23.5
	8H	19.1	19.7	19.6	20.2	20.8	22.4	23.0	22.9	23.5	24.0

Maximum UGR = 24.3

POLAR GRAPH



Maximum Candela = 751.791 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.)