



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MD4AEG-4-L22-L52-840-A-DIM-UNV ALL ON_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]gen from BALLABS TEST NO. 19723.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 19-JUN-2020

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 2-56 LED (EXAM), 2-32 LED (AMBIENT) 22" ARRAYS 6x4' LUMINAIRE

[MORE] WHITE REFL w/INTERNAL CONVEX FROST ACRYLIC RIBBED LENS

[MORE] FLAT CLEAR ACRYLIC BTM LENS

[LUMCAT] MD4AEG-4-L22-L52-840-A-DIM-UNV_ALL ON

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7615
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
Total Luminaire Watts	71.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.44
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.43 ft
Luminous Width (90-270)	3.79 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	23977	23787	19291
55	22888	22741	16524
65	16576	20158	13850
75	5719	11600	7668
85	386	675	965

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0	3166.906	3166.906	3166.906	3166.906	3166.906	3166.906	3166.906	3166.906	3166.906
5	3299.863	3313.792	3303.662	3292.266	3228.953	3104.860	3004.825	2938.980	3066.872
10	3372.040	3385.968	3368.241	3336.584	3215.024	3032.683	2857.940	2733.847	2821.218
15	3388.501	3411.294	3393.566	3341.650	3175.770	2925.051	2690.794	2518.583	2566.701
20	3339.117	3388.501	3372.040	3299.863	3087.132	2760.438	2456.537	2257.734	2288.125
25	3247.947	3315.058	3303.662	3213.758	2956.708	2570.500	2214.682	1972.827	1977.892
30	3120.055	3179.569	3175.770	3084.600	2781.964	2331.177	1969.028	1695.517	1706.913
35	2970.637	3004.825	3009.890	2911.122	2561.636	2075.394	1706.913	1430.869	1435.934
40	2781.964	2812.355	2787.029	2670.534	2328.645	1817.077	1422.005	1180.151	1189.014
45	2552.772	2626.215	2532.512	2384.360	2053.867	1543.566	1175.086	953.491	966.153
50	2293.190	2378.029	2262.799	2062.731	1725.907	1273.854	953.491	766.085	790.144
55	1976.626	2051.335	1963.963	1725.907	1427.070	1002.875	754.689	611.602	612.868
60	1548.631	1698.049	1630.938	1363.758	1167.488	742.026	567.283	448.255	427.995
65	1054.791	1216.872	1282.717	1014.271	881.314	512.834	378.611	268.446	244.387
70	563.484	743.292	880.048	676.181	550.821	308.966	192.471	117.762	115.229
75	222.861	312.765	452.053	334.292	298.836	138.022	68.378	49.384	58.248
80	53.183	70.910	117.762	93.703	103.833	21.526	18.994	17.728	22.793
85	5.065	7.598	8.864	7.598	12.663	0.000	0.000	0.000	3.799
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : MD4AEG-4-L22-L52-840-A-DIM-UNV ALL ON_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1161.03	N.A.	15.20
0-30	2435.71	N.A.	32.00
0-40	3912.29	N.A.	51.40
0-60	6569.13	N.A.	86.30
0-80	7595.35	N.A.	99.70
0-90	7614.55	N.A.	100.00
10-90	7313.41	N.A.	96.00
20-40	2751.26	N.A.	36.10
20-50	4199.69	N.A.	55.20
40-70	3423.84	N.A.	45.00
60-80	1026.22	N.A.	13.50
70-80	259.22	N.A.	3.40
80-90	19.19	N.A.	0.30
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	7614.55	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	301.13
10-20	859.90
20-30	1274.68
30-40	1476.58
40-50	1448.42
50-60	1208.41
60-70	767.00
70-80	259.22
80-90	19.19
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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87
2	101	94	88	82	99	92	86	82	88	84	80	85	81	78	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	73	69	66	64
4	85	74	66	60	83	73	65	59	70	64	59	68	62	58	66	61	57	55
5	79	67	58	52	77	65	58	52	63	56	51	61	55	50	60	54	50	48
6	73	60	52	46	71	59	51	45	57	50	45	56	49	45	54	49	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	38
8	63	50	42	36	62	49	42	36	48	41	36	47	40	36	46	40	36	34
9	59	46	38	33	58	45	38	33	44	37	33	43	37	32	42	36	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28

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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

X=2H	Y=2H	24.6	26.1	24.9	26.4	26.7	21.8	23.4	22.2	23.7	24.0
	3H	25.5	26.9	25.9	27.2	27.6	23.0	24.4	23.4	24.8	25.1
	4H	25.6	26.9	26.0	27.2	27.6	23.3	24.6	23.7	25.0	25.3
	6H	25.6	26.8	26.0	27.1	27.5	23.4	24.6	23.8	25.0	25.3
	8H	25.5	26.7	26.0	27.1	27.5	23.4	24.5	23.8	24.9	25.3
	12H	25.5	26.6	25.9	27.0	27.4	23.3	24.4	23.8	24.8	25.3

UGR Viewed Endwise

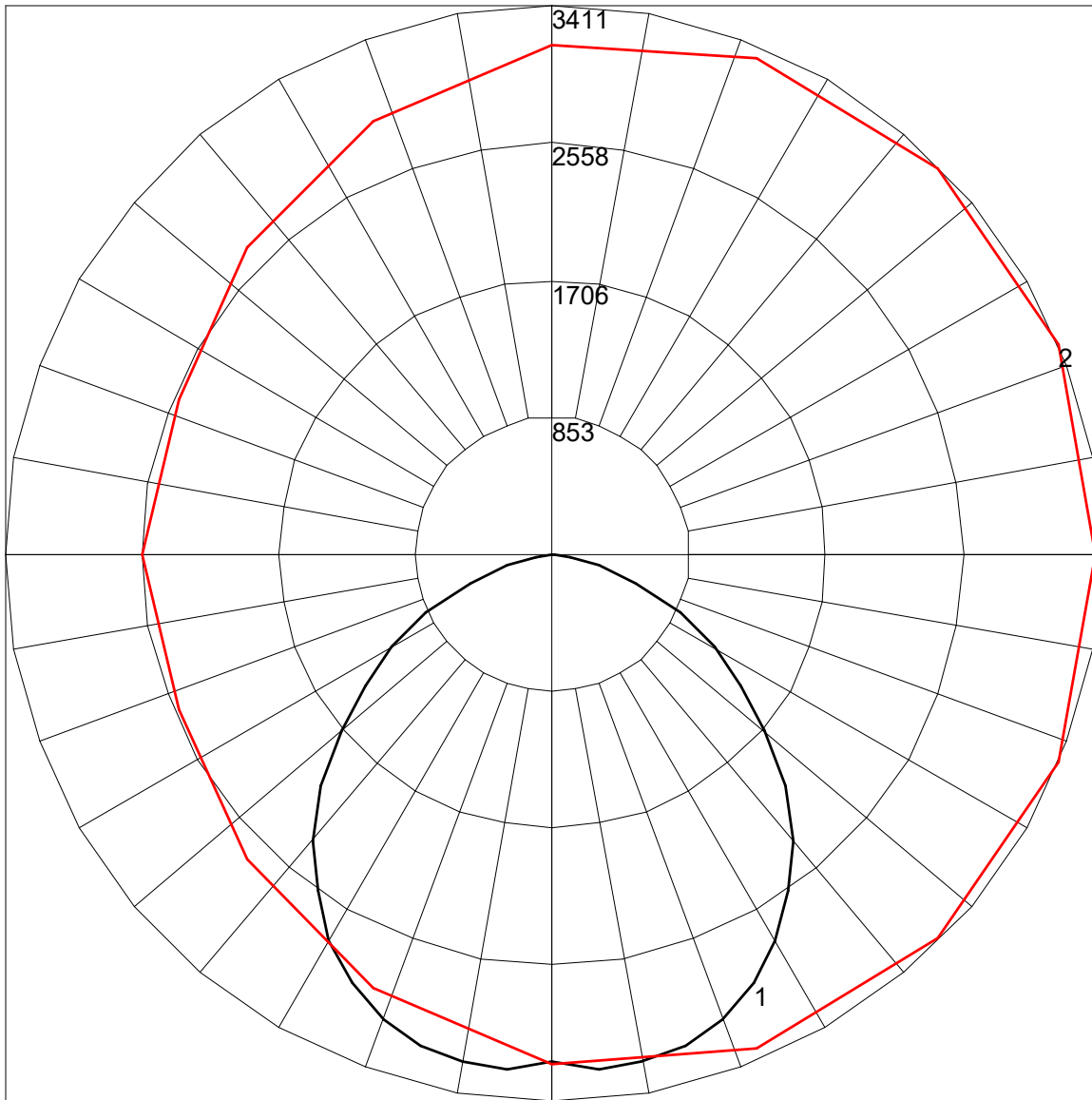
4H	2H	25.1	26.4	25.5	26.7	27.1	22.5	23.8	22.9	24.1	24.5
	3H	26.2	27.3	26.6	27.7	28.1	23.8	24.9	24.2	25.3	25.7
	4H	26.4	27.3	26.8	27.7	28.2	24.1	25.1	24.6	25.5	25.9
	6H	26.4	27.2	26.8	27.6	28.1	24.2	25.1	24.7	25.5	26.0
	8H	26.3	27.1	26.8	27.5	28.0	24.2	25.0	24.7	25.4	25.9
	12H	26.3	27.0	26.8	27.5	27.9	24.2	24.9	24.7	25.4	25.8

8H	4H	26.5	27.2	26.9	27.7	28.1	24.2	25.0	24.7	25.5	25.9
	6H	26.5	27.1	27.0	27.6	28.1	24.3	25.0	24.8	25.5	25.9
	8H	26.4	27.0	26.9	27.5	28.0	24.3	24.9	24.8	25.4	25.9
	12H	26.4	26.9	26.9	27.4	28.0	24.3	24.8	24.8	25.3	25.9

12H	4H	26.4	27.1	26.9	27.6	28.1	24.2	24.9	24.7	25.4	25.8
	6H	26.4	27.0	27.0	27.5	28.0	24.3	24.9	24.8	25.3	25.9
	8H	26.4	26.9	26.9	27.4	28.0	24.3	24.8	24.8	25.3	25.9

Maximum UGR = 28.2

POLAR GRAPH



Maximum Candela = 3411.294 Located At Horizontal Angle = 22.5, Vertical Angle = 15
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (15) (Through Max. Cd.)