



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MD4AEG-4-L22-L66-840-A-DIM-UNV BOTH ON_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20051.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIE, INC

[ISSUEDATE] 16-JUL-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-84 LED (EXAM) & 2-56 LED (AMBIENT) 4' MEDICAL ASYM TROFFER

[MORE] WHITE REFL w/FROSTED ACRYLIC RIBBED LENS IN DOOR & CLEAR

[MORE] ACRYLIC LENS

[LUMCAT] MD4AEG-L22-L66-840-A BOTH ON

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8917
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
Total Luminaire Watts	80.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.52
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.44 ft
Luminous Width (90-270)	3.77 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	30367	28604	20975
55	28383	26456	17232
65	18587	21810	12975
75	6358	10395	7396
85	0	409	710

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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	3737.532	3737.532	3737.532	3737.532	3737.532	3737.532	3737.532	3737.532	3737.532
5	3900.360	3911.324	3881.274	3865.198	3791.388	3633.935	3529.027	3464.123	3597.204
10	4026.456	4043.922	3990.002	3912.938	3756.110	3500.089	3299.179	3194.977	3300.857
15	4097.970	4095.887	4041.137	3911.002	3681.515	3347.787	3061.234	2903.923	3017.718
20	4104.220	4097.693	4036.963	3855.191	3554.922	3132.260	2767.858	2586.335	2674.505
25	4046.414	4038.434	3970.027	3745.684	3378.653	2902.456	2495.143	2285.371	2321.723
30	3935.498	3924.489	3850.385	3596.719	3168.417	2658.518	2217.322	1988.972	1992.225
35	3768.887	3769.126	3674.038	3376.066	2903.297	2379.565	1905.091	1666.625	1663.557
40	3567.500	3560.105	3423.277	3113.672	2604.898	2088.497	1602.917	1379.839	1366.129
45	3298.058	3298.296	3106.602	2819.472	2277.986	1783.898	1326.066	1140.872	1102.545
50	2956.420	2979.378	2730.496	2468.567	1902.426	1463.610	1045.055	913.575	878.561
55	2500.402	2595.292	2330.700	2049.306	1518.101	1151.539	785.227	699.526	688.421
60	1884.789	2089.899	1911.638	1609.486	1166.773	839.630	576.104	500.763	497.432
65	1206.473	1441.510	1415.718	1203.169	842.240	545.591	386.446	311.974	301.594
70	656.125	821.069	880.681	816.195	549.976	326.552	207.451	154.887	155.453
75	252.728	347.579	413.210	408.805	294.000	163.530	84.208	68.376	80.029
80	59.451	82.048	106.079	110.542	101.796	47.496	29.362	26.918	30.513
85	0.000	4.463	5.472	6.341	9.511	4.463	3.312	2.161	4.463
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180	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-L66-840-A-DIM-UNV BOTH ON_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1360.8	N.A.	15.30
0-30	2857.92	N.A.	32.00
0-40	4607.68	N.A.	51.70
0-60	7752.84	N.A.	86.90
0-80	8896.14	N.A.	99.80
0-90	8917.38	N.A.	100.00
10-90	8563.48	N.A.	96.00
20-40	3246.88	N.A.	36.40
20-50	4973.83	N.A.	55.80
40-70	4005.41	N.A.	44.90
60-80	1143.3	N.A.	12.80
70-80	283.05	N.A.	3.20
80-90	21.24	N.A.	0.20
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	8917.38	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	353.91
10-20	1006.89
20-30	1497.12
30-40	1749.76
40-50	1726.95
50-60	1418.21
60-70	860.25
70-80	283.05
80-90	21.24
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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	82	79	76	74
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66	64
4	86	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	58	52	77	66	58	52	64	57	51	62	56	51	60	55	50	48
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	44	43
7	68	55	47	41	66	54	46	41	53	45	40	51	45	40	50	44	40	38
8	63	50	42	36	62	50	42	36	48	41	36	47	41	36	46	40	36	34
9	59	46	38	33	58	46	38	33	44	38	33	43	37	33	42	37	32	31
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	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

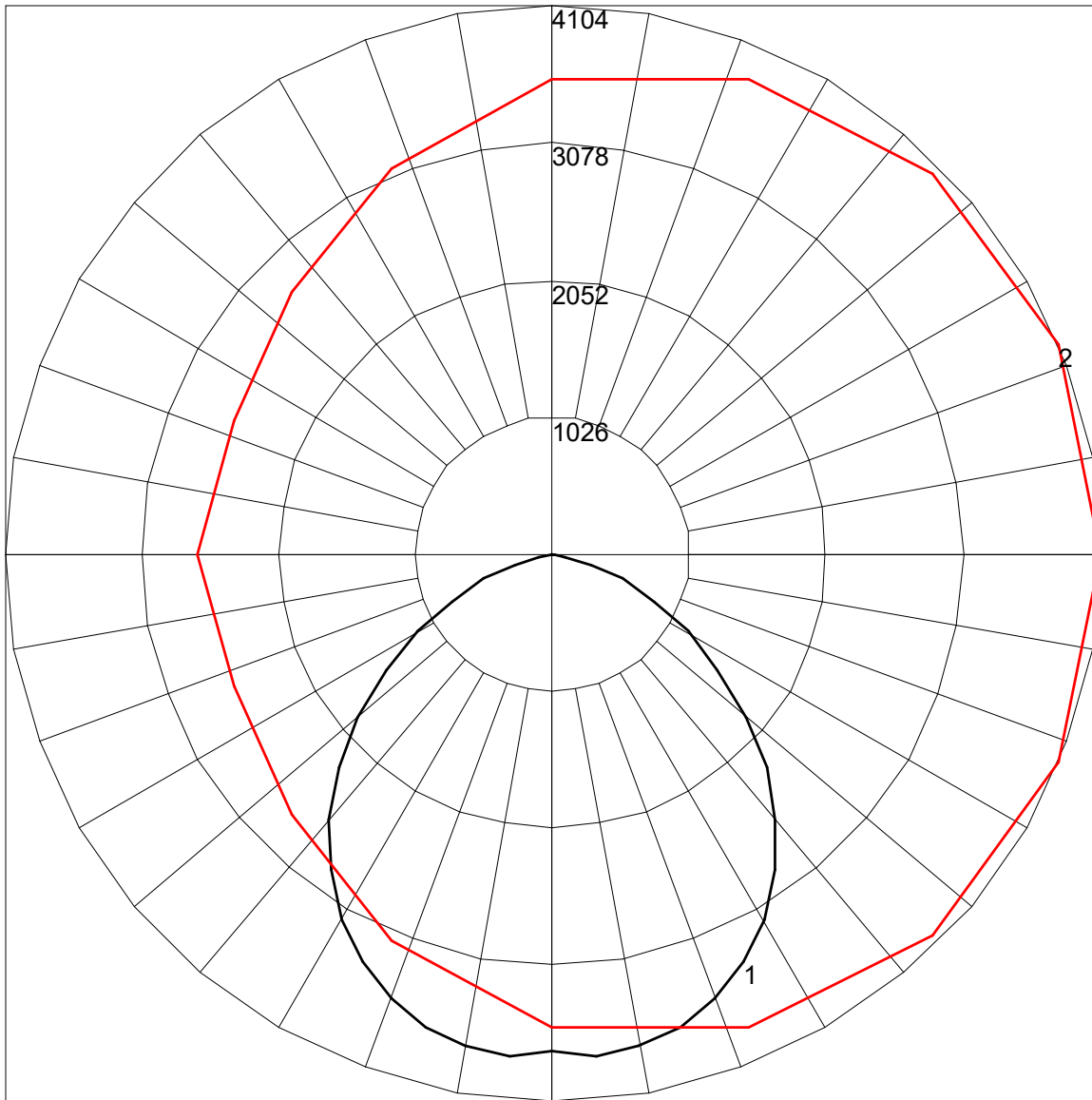
X=2H	Y=2H	25.5	27.0	25.8	27.3	27.6	22.1	23.7	22.5	24.0	24.3
	3H	26.2	27.6	26.6	27.9	28.3	23.2	24.6	23.6	24.9	25.3
	4H	26.3	27.6	26.7	27.9	28.3	23.5	24.7	23.9	25.1	25.5
	6H	26.3	27.5	26.7	27.8	28.2	23.5	24.7	23.9	25.1	25.4
	8H	26.2	27.4	26.7	27.8	28.2	23.5	24.6	23.9	25.0	25.4
	12H	26.2	27.3	26.7	27.7	28.1	23.5	24.5	23.9	24.9	25.3

UGR Viewed Endwise

4H	2H	25.9	27.1	26.3	27.5	27.9	22.8	24.0	23.2	24.4	24.8
	3H	26.8	27.9	27.2	28.3	28.7	24.0	25.0	24.4	25.4	25.8
	4H	26.9	27.9	27.3	28.3	28.7	24.2	25.2	24.7	25.6	26.1
	6H	26.9	27.7	27.4	28.2	28.6	24.3	25.2	24.8	25.6	26.1
	8H	26.9	27.6	27.3	28.1	28.5	24.3	25.1	24.8	25.5	26.0
	12H	26.8	27.5	27.3	28.0	28.5	24.3	25.0	24.8	25.5	25.9
8H	4H	26.9	27.7	27.4	28.2	28.6	24.3	25.1	24.8	25.5	26.0
	6H	26.9	27.6	27.4	28.1	28.5	24.4	25.0	24.9	25.5	26.0
	8H	26.9	27.5	27.4	28.0	28.5	24.4	25.0	24.9	25.5	26.0
	12H	26.9	27.4	27.4	27.9	28.4	24.4	24.9	24.9	25.4	25.9
12H	4H	26.9	27.6	27.4	28.1	28.6	24.3	25.0	24.8	25.5	25.9
	6H	26.9	27.5	27.4	27.9	28.5	24.4	24.9	24.9	25.4	25.9
	8H	26.9	27.4	27.4	27.9	28.4	24.4	24.9	24.9	25.4	25.9

Maximum UGR = 28.7

POLAR GRAPH



Maximum Candela = 4104.22 Located At Horizontal Angle = 0, Vertical Angle = 20
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)