



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MD4AEG-4-L26-L52-840-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-L26-L52-840-A-DIM-UNV BOTH ON

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7948
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
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	27067	25496	18696
55	25298	23581	15360
65	16567	19440	11565
75	5667	9265	6592
85	0	364	633

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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	3331.378	3331.378	3331.378	3331.378	3331.378	3331.378	3331.378	3331.378	3331.378
5	3476.512	3486.285	3459.500	3445.171	3379.382	3239.039	3145.531	3087.680	3206.299
10	3588.906	3604.474	3556.413	3487.724	3347.937	3119.738	2940.660	2847.783	2942.156
15	3652.648	3650.791	3601.991	3485.998	3281.448	2983.987	2728.573	2588.357	2689.786
20	3658.218	3652.401	3598.271	3436.251	3168.612	2791.880	2467.078	2305.281	2383.869
25	3606.695	3599.582	3538.608	3338.645	3011.498	2587.049	2223.999	2037.022	2069.423
30	3507.832	3498.019	3431.968	3205.867	2824.109	2369.619	1976.368	1772.832	1775.732
35	3359.326	3359.539	3274.785	3009.192	2587.799	2120.980	1698.066	1485.515	1482.780
40	3179.824	3173.232	3051.273	2775.312	2321.826	1861.542	1428.729	1229.894	1217.673
45	2939.662	2939.874	2769.011	2513.083	2030.439	1590.044	1181.964	1016.894	982.733
50	2635.149	2655.612	2433.776	2200.311	1695.691	1304.561	931.490	814.298	783.089
55	2228.686	2313.264	2077.425	1826.610	1353.131	1026.403	699.897	623.510	613.611
60	1679.971	1862.792	1703.903	1434.585	1039.981	748.388	513.499	446.346	443.376
65	1075.367	1284.863	1261.873	1072.422	750.715	486.302	344.452	278.072	268.821
70	584.824	731.844	784.978	727.500	490.211	291.066	184.907	138.056	138.560
75	225.264	309.808	368.307	364.381	262.051	145.759	75.058	60.946	71.332
80	52.990	73.132	94.551	98.529	90.734	42.335	26.171	23.993	27.197
85	0.000	3.978	4.878	5.652	8.477	3.978	2.952	1.926	3.978
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-L26-L52-840-A-DIM-UNV BOTH ON_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1212.92	N.A.	15.30
0-30	2547.36	N.A.	32.00
0-40	4106.97	N.A.	51.70
0-60	6910.35	N.A.	86.90
0-80	7929.41	N.A.	99.80
0-90	7948.34	N.A.	100.00
10-90	7632.89	N.A.	96.00
20-40	2894.05	N.A.	36.40
20-50	4433.33	N.A.	55.80
40-70	3570.15	N.A.	44.90
60-80	1019.06	N.A.	12.80
70-80	252.29	N.A.	3.20
80-90	18.93	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	7948.34	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	315.45
10-20	897.47
20-30	1334.43
30-40	1559.61
40-50	1539.28
50-60	1264.1
60-70	766.77
70-80	252.29
80-90	18.93
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	106	106	106	106	104	104	104	104	99	99	99	95	95	95	91	91	91	89
1	98	95	91	88	96	93	90	87	89	87	84	86	84	82	82	81	79	78
2	90	84	78	74	88	82	77	73	79	75	71	76	73	70	74	71	68	66
3	83	74	68	62	81	73	67	62	70	65	61	68	63	60	66	62	59	57
4	76	66	59	53	74	65	58	53	63	57	52	61	56	52	59	55	51	49
5	70	60	52	46	68	59	52	46	57	51	46	55	50	45	53	49	45	43
6	65	54	46	41	63	53	46	41	51	45	40	50	44	40	49	44	40	38
7	60	49	41	36	59	48	41	36	47	41	36	46	40	36	44	39	35	34
8	56	45	37	32	55	44	37	32	43	37	32	42	36	32	41	36	32	30
9	53	41	34	29	51	41	34	29	40	33	29	39	33	29	38	33	29	27
10	49	38	31	27	48	38	31	27	37	31	27	36	30	26	35	30	26	25

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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

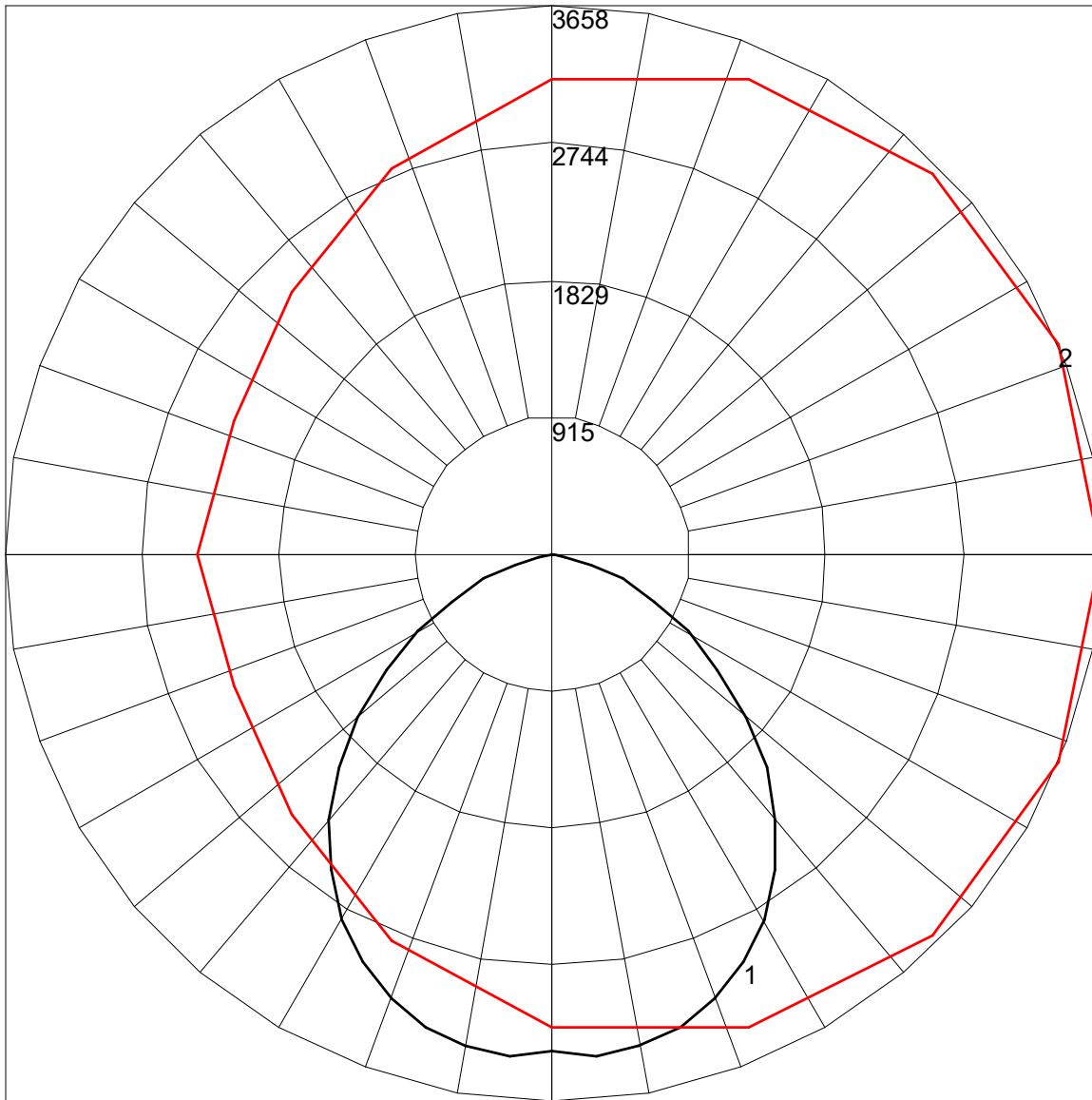
4H	2H	25.9	27.1	26.3	27.5	27.9	22.8	24.0	23.2	24.4	24.8
	3H	26.8	27.9	27.2	28.3	28.7	24.0	25.0	24.4	25.4	25.8
	4H	26.9	27.9	27.3	28.3	28.7	24.2	25.2	24.7	25.6	26.1
	6H	26.9	27.7	27.4	28.2	28.6	24.3	25.2	24.8	25.6	26.1
	8H	26.9	27.6	27.3	28.1	28.5	24.3	25.1	24.8	25.5	26.0
	12H	26.8	27.5	27.3	28.0	28.5	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 = 3658.218 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.)