



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MD4AEG-4-L26-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

[ISSUE DATE] 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-L56-840-A-DIM-UNV BOTH ON

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	9251
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
Total Luminaire Watts	83.7
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	31505	29676	21760
55	29446	27447	17878
65	19283	22627	13461
75	6596	10784	7673
85	0	424	737

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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	3877.528	3877.528	3877.528	3877.528	3877.528	3877.528	3877.528	3877.528	3877.528
5	4046.456	4057.831	4026.655	4009.977	3933.402	3770.051	3661.214	3593.879	3731.944
10	4177.275	4195.395	4139.455	4059.505	3896.802	3631.192	3422.756	3314.652	3424.497
15	4251.468	4249.307	4192.506	4057.497	3819.413	3473.185	3175.899	3012.695	3130.753
20	4257.951	4251.180	4188.176	3999.595	3688.079	3249.585	2871.534	2683.212	2774.684
25	4197.980	4189.702	4118.732	3885.986	3505.207	3011.173	2588.604	2370.974	2408.687
30	4082.910	4071.489	3994.609	3731.441	3287.097	2758.098	2300.376	2063.472	2066.848
35	3910.058	3910.306	3811.657	3502.523	3012.046	2468.696	1976.450	1729.052	1725.869
40	3701.128	3693.456	3551.503	3230.300	2702.469	2166.725	1662.957	1431.524	1417.300
45	3421.593	3421.841	3222.966	2925.081	2363.312	1850.718	1375.737	1183.605	1143.843
50	3067.159	3090.976	2832.772	2561.032	1973.685	1518.432	1084.200	947.795	911.469
55	2594.059	2692.504	2418.001	2126.067	1574.965	1194.672	814.639	725.729	714.207
60	1955.388	2168.181	1983.242	1669.772	1210.476	871.080	597.683	519.520	516.064
65	1251.664	1495.505	1468.746	1248.236	873.788	566.027	400.921	323.659	312.891
70	680.701	851.824	913.668	846.768	570.577	338.783	215.221	160.689	161.276
75	262.195	360.598	428.687	424.118	305.012	169.655	87.363	70.938	83.026
80	61.678	85.121	110.052	114.682	105.609	49.275	30.462	27.927	31.656
85	0.000	4.630	5.677	6.578	9.867	4.630	3.436	2.242	4.630
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-L66-840-A-DIM-UNV BOTH ON_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1411.77	N.A.	15.30
0-30	2964.97	N.A.	32.00
0-40	4780.27	N.A.	51.70
0-60	8043.24	N.A.	86.90
0-80	9229.36	N.A.	99.80
0-90	9251.4	N.A.	100.00
10-90	8884.24	N.A.	96.00
20-40	3368.5	N.A.	36.40
20-50	5160.13	N.A.	55.80
40-70	4155.44	N.A.	44.90
60-80	1186.13	N.A.	12.80
70-80	293.65	N.A.	3.20
80-90	22.04	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	9251.4	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	367.16
10-20	1044.61
20-30	1553.2
30-40	1815.3
40-50	1791.63
50-60	1471.34
60-70	892.48
70-80	293.65
80-90	22.04
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	25.6	27.1	25.9	27.4	27.7	22.2	23.8	22.6	24.1	24.4
	3H	26.3	27.7	26.7	28.0	28.4	23.3	24.7	23.7	25.0	25.4
	4H	26.4	27.7	26.8	28.0	28.4	23.6	24.8	24.0	25.2	25.6
	6H	26.4	27.6	26.8	27.9	28.3	23.6	24.8	24.0	25.2	25.5
	8H	26.3	27.5	26.8	27.9	28.3	23.6	24.7	24.0	25.1	25.5
	12H	26.3	27.4	26.8	27.8	28.2	23.6	24.6	24.0	25.0	25.4

UGR Viewed Endwise

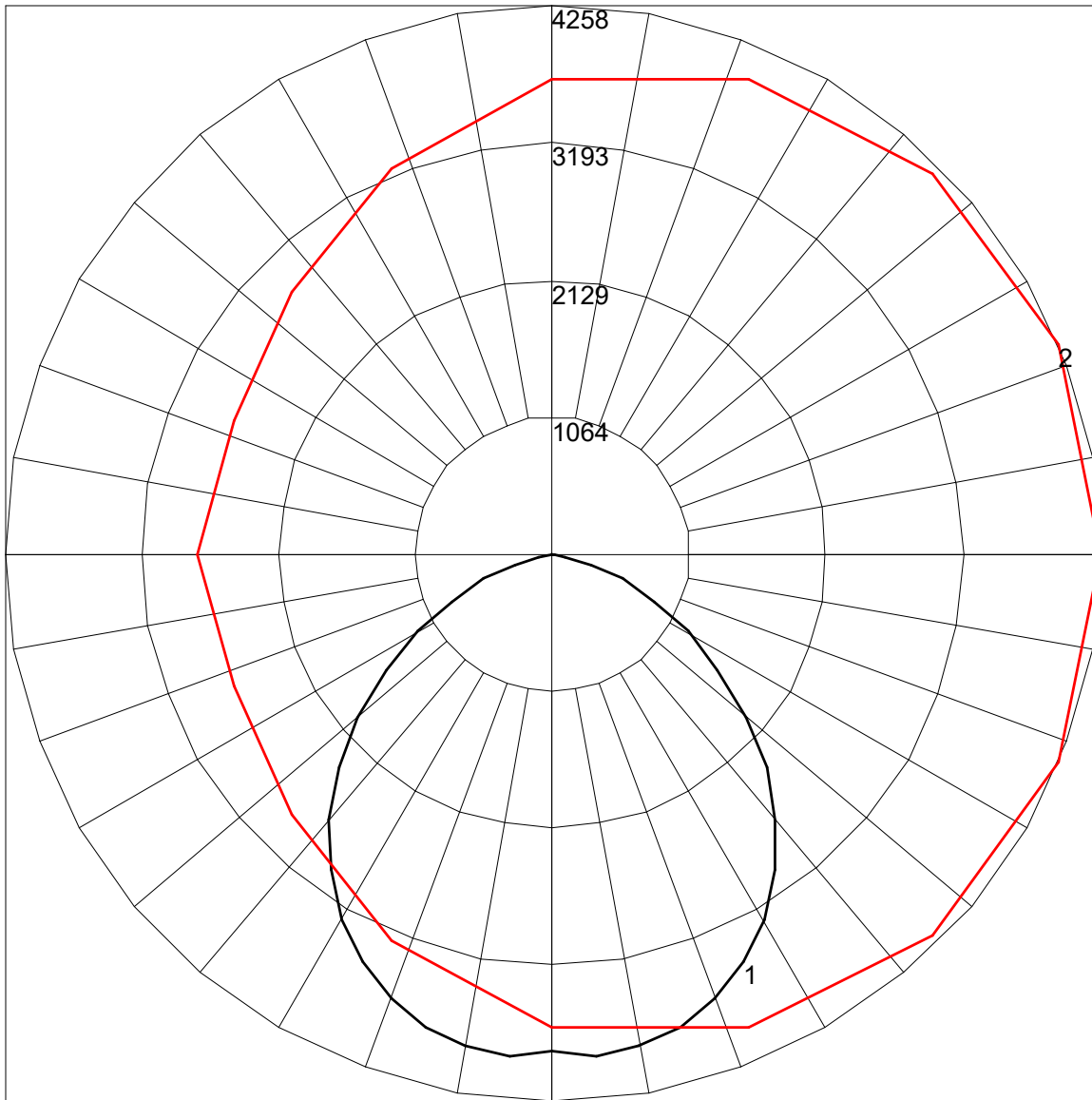
4H	2H	26.0	27.2	26.4	27.6	28.0	22.9	24.1	23.3	24.5	24.9
	3H	26.9	28.0	27.3	28.4	28.8	24.1	25.1	24.5	25.5	25.9
	4H	27.0	28.0	27.4	28.4	28.8	24.3	25.3	24.8	25.7	26.2
	6H	27.0	27.8	27.5	28.3	28.7	24.4	25.3	24.9	25.7	26.2
	8H	27.0	27.7	27.4	28.2	28.6	24.4	25.2	24.9	25.6	26.1
	12H	26.9	27.6	27.4	28.1	28.6	24.4	25.1	24.9	25.6	26.0

8H	4H	27.0	27.8	27.5	28.3	28.7	24.4	25.2	24.9	25.6	26.1
	6H	27.0	27.7	27.5	28.2	28.6	24.5	25.1	25.0	25.6	26.1
	8H	27.0	27.6	27.5	28.1	28.6	24.5	25.1	25.0	25.6	26.1
	12H	27.0	27.5	27.5	28.0	28.5	24.5	25.0	25.0	25.5	26.0

12H	4H	27.0	27.7	27.5	28.2	28.7	24.4	25.1	24.9	25.6	26.0
	6H	27.0	27.6	27.5	28.0	28.6	24.5	25.0	25.0	25.5	26.0
	8H	27.0	27.5	27.5	28.0	28.5	24.5	25.0	25.0	25.5	26.0

Maximum UGR = 28.8

POLAR GRAPH



Maximum Candela = 4257.951 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.)