



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AMD4AERNG-L27-835-A-DIM-UNV AMBIENT, EXAM, AND READING_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 18937.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 19-AUG-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 2x4' MULTI COMPARTMENT LED TROFFER
 [MORE] FROSTED ACRYLIC DIFFUSER
 [LUMCAT] AMD4AERNG-L27-835-A-DIM-UNV AMBIENT, EXAM, & READING ONLY
 [LAMPCAT] HLM 80 CRI, 3500K CCT
 [SEARCH_SOURCETYPE] LED
 [SEARCH_APPLICATION] INDOOR,DIRECT,MEDICAL
 [SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	12660
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	102.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 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	7074	6723	6062
55	6435	6118	5135
65	5128	5415	4234
75	3095	3700	3186
85	2112	2457	2579

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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	5234.299	5234.299	5234.299	5234.299	5234.299	5234.299	5234.299	5234.299	5234.299
5	5233.097	5233.584	5223.163	5201.039	5178.970	5147.879	5121.934	5098.907	5086.824
10	5205.745	5206.448	5188.506	5159.637	5113.850	5059.352	5001.761	4957.883	4935.329
15	5041.530	5034.082	5018.709	4985.092	4916.893	4841.577	4757.735	4692.049	4671.523
20	4926.451	4912.894	4896.213	4860.433	4780.725	4675.193	4557.043	4467.950	4436.138
25	4529.506	4522.724	4490.663	4440.117	4349.738	4232.466	4110.490	4015.887	3975.470
30	4270.314	4255.649	4217.899	4148.948	4047.263	3922.853	3794.482	3693.483	3643.952
35	4036.093	4010.128	3955.640	3867.940	3744.678	3631.281	3509.737	3413.244	3369.526
40	3724.049	3681.331	3593.877	3474.462	3333.485	3234.159	3144.492	3067.068	3037.003
45	3492.597	3442.182	3319.464	3146.594	2993.233	2916.856	2867.792	2818.476	2785.471
50	3033.806	2995.886	2860.566	2656.597	2494.636	2445.612	2435.998	2407.073	2357.604
55	2577.042	2556.276	2450.120	2223.130	2056.422	2043.688	2066.627	2016.891	1954.236
60	1999.048	2019.130	2001.710	1785.837	1606.627	1623.732	1673.517	1555.552	1469.370
65	1513.173	1548.136	1597.918	1436.664	1249.462	1297.369	1328.608	1181.183	1105.779
70	982.137	1036.071	1107.608	1037.005	884.139	929.653	908.396	793.629	722.934
75	559.283	607.475	668.687	665.775	575.788	588.861	543.143	479.452	426.185
80	295.009	324.959	361.779	383.825	349.743	342.350	302.585	276.329	253.373
85	128.530	137.190	149.524	157.981	156.944	144.717	141.424	135.213	126.789
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 : AMD4AERNG-L27-835-A-DIM-UNV AMBIENT, EXAM, AND READING_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1876.33	N.A.	14.80
0-30	3874.7	N.A.	30.60
0-40	6197.03	N.A.	49.00
0-60	10509.25	N.A.	83.00
0-80	12492.6	N.A.	98.70
0-90	12659.91	N.A.	100.00
10-90	12168.3	N.A.	96.10
20-40	4320.7	N.A.	34.10
20-50	6666.55	N.A.	52.70
40-70	5655.83	N.A.	44.70
60-80	1983.36	N.A.	15.70
70-80	639.74	N.A.	5.10
80-90	167.31	N.A.	1.30
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	12659.91	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	491.62
10-20	1384.72
20-30	1998.36
30-40	2322.34
40-50	2345.85
50-60	1966.36
60-70	1343.62
70-80	639.74
80-90	167.31
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	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	98	90	85	79	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53
5	78	65	56	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	48	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	28	38	32	28	27

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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	18.8	20.4	19.2	20.7	21.0	17.5	19.1	17.9	19.4	19.7
	3H	20.1	21.5	20.5	21.8	22.2	19.0	20.4	19.4	20.8	21.1
	4H	20.4	21.8	20.8	22.1	22.5	19.5	20.8	19.9	21.2	21.5
	6H	20.6	21.8	21.0	22.2	22.6	19.8	21.0	20.2	21.4	21.8
	8H	20.7	21.8	21.1	22.2	22.6	19.9	21.1	20.4	21.5	21.9
	12H	20.7	21.8	21.1	22.2	22.6	20.0	21.1	20.4	21.5	21.9

UGR Viewed Endwise

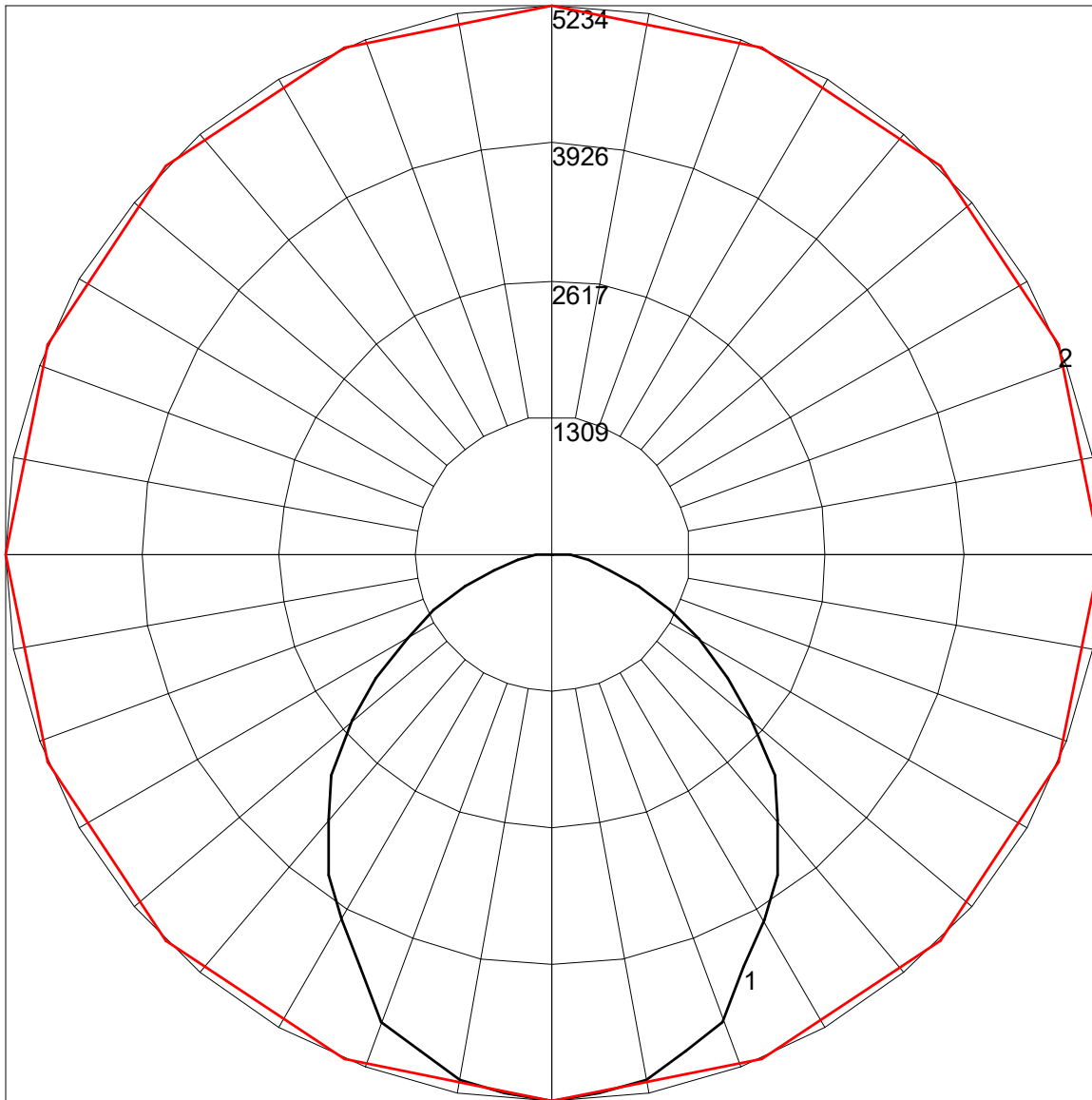
4H	2H	19.4	20.7	19.8	21.0	21.4	18.2	19.6	18.6	19.9	20.3
	3H	20.8	21.9	21.2	22.3	22.7	19.9	21.0	20.3	21.4	21.8
	4H	21.2	22.2	21.7	22.7	23.1	20.5	21.5	20.9	21.9	22.3
	6H	21.5	22.4	22.0	22.8	23.3	20.9	21.8	21.4	22.2	22.7
	8H	21.6	22.4	22.1	22.9	23.3	21.1	21.9	21.5	22.3	22.8
	12H	21.7	22.4	22.1	22.9	23.3	21.2	21.9	21.6	22.4	22.8
8H	4H	21.4	22.3	21.9	22.7	23.2	20.7	21.5	21.1	21.9	22.4
	6H	21.8	22.5	22.3	23.0	23.4	21.2	21.9	21.7	22.4	22.9
	8H	21.9	22.5	22.4	23.0	23.5	21.4	22.0	22.0	22.5	23.0
	12H	22.0	22.6	22.5	23.1	23.6	21.6	22.1	22.1	22.6	23.2
12H	4H	21.5	22.2	21.9	22.7	23.1	20.7	21.4	21.2	21.9	22.4
	6H	21.8	22.4	22.4	22.9	23.4	21.3	21.9	21.8	22.3	22.9
	8H	22.0	22.5	22.5	23.0	23.6	21.5	22.0	22.0	22.5	23.1

Maximum UGR = 23.6

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POLAR GRAPH



Maximum Candela = 5234.299 Located At Horizontal Angle = 0, Vertical Angle = 0

1 - Vertical Plane Through Horizontal Angles (90 - 270)

2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)