



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AMD4AERNG-P43-840-A-POE EXAM ONLY\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] GEN from BALLABS TEST NO. 18938.0  
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
[ISSUEDATE] 24-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-P43-840-A-PoE EXAM ONLY  
[LAMPCAT] HLM 80 CRI, 4000K 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	6039
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
Total Luminaire Watts	42.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.10
Spacing Criterion (Diagonal)	1.26
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	2938	2998	3007
55	2464	2694	2647
65	2114	2359	1988
75	1688	1584	1162
85	1439	1241	1092

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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>
<b>0</b>	2591.703	2591.703	2591.703	2591.703	2591.703	2591.703	2591.703	2591.703	2591.703
<b>5</b>	2544.883	2542.617	2541.107	2537.331	2534.311	2533.556	2537.331	2537.331	2537.331
<b>10</b>	2529.025	2525.249	2511.656	2499.573	2492.777	2498.063	2507.880	2511.656	2514.677
<b>15</b>	2408.954	2405.179	2383.279	2359.869	2354.583	2362.890	2376.483	2395.362	2402.158
<b>20</b>	2368.176	2352.318	2313.804	2279.822	2268.495	2276.047	2297.946	2335.704	2348.542
<b>25</b>	2121.239	2104.626	2066.868	2034.396	2017.783	2022.313	2055.540	2093.298	2103.115
<b>30</b>	1970.963	1953.594	1914.326	1877.323	1856.934	1865.996	1906.019	1936.981	1948.308
<b>35</b>	1813.135	1803.318	1770.846	1738.374	1724.026	1736.109	1761.784	1782.173	1790.480
<b>40</b>	1614.528	1614.528	1600.935	1585.077	1581.301	1586.587	1585.077	1592.628	1588.853
<b>45</b>	1450.659	1464.252	1480.110	1484.641	1484.641	1480.110	1457.455	1442.352	1422.718
<b>50</b>	1196.170	1221.846	1261.869	1280.748	1268.666	1264.135	1244.501	1202.967	1172.761
<b>55</b>	986.992	1022.484	1079.121	1082.142	1060.242	1067.038	1067.038	1001.340	962.827
<b>60</b>	774.792	820.857	872.963	826.898	786.120	826.898	860.880	801.223	755.158
<b>65</b>	623.761	676.622	696.256	619.985	586.758	626.781	678.887	655.477	604.127
<b>70</b>	457.626	505.201	474.994	403.254	372.293	401.744	461.402	491.608	440.257
<b>75</b>	305.084	328.494	286.205	232.589	209.934	225.037	278.653	318.677	291.491
<b>80</b>	189.545	192.565	157.828	132.908	123.846	129.132	154.807	180.483	178.217
<b>85</b>	87.598	80.802	75.516	69.475	66.454	68.719	70.985	70.985	79.292
<b>90</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	918.45	N.A.	15.20
0-30	1879.86	N.A.	31.10
0-40	2981.14	N.A.	49.40
0-60	5022.63	N.A.	83.20
0-80	5956.74	N.A.	98.60
0-90	6039.36	N.A.	100.00
10-90	5797.5	N.A.	96.00
20-40	2062.68	N.A.	34.20
20-50	3176.3	N.A.	52.60
40-70	2673.31	N.A.	44.30
60-80	934.11	N.A.	15.50
70-80	302.29	N.A.	5.00
80-90	82.63	N.A.	1.40
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	6039.36	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	241.86
10-20	676.59
20-30	961.41
30-40	1101.28
40-50	1113.62
50-60	927.88
60-70	631.82
70-80	302.29
80-90	82.63
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	89	89	89	89	87	87	87	87	83	83	83	79	79	79	76	76	76	74
1	82	78	75	73	80	77	74	71	73	71	69	71	69	67	68	66	65	64
2	75	69	64	60	73	67	63	59	65	61	58	62	59	57	60	58	55	54
3	68	61	55	50	67	60	54	50	58	53	49	55	52	48	54	50	47	46
4	63	54	48	43	61	53	47	43	51	46	42	50	45	42	48	44	41	40
5	58	49	42	37	56	48	42	37	46	41	37	45	40	36	43	39	36	35
6	54	44	38	33	52	43	37	33	42	37	33	41	36	32	40	35	32	30
7	50	40	34	29	49	39	33	29	38	33	29	37	32	29	36	32	29	27
8	46	37	30	26	45	36	30	26	35	30	26	34	29	26	33	29	26	24
9	43	34	28	24	42	33	28	24	32	27	24	32	27	23	31	27	23	22
10	41	31	25	22	40	31	25	22	30	25	21	29	25	21	29	24	21	20

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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

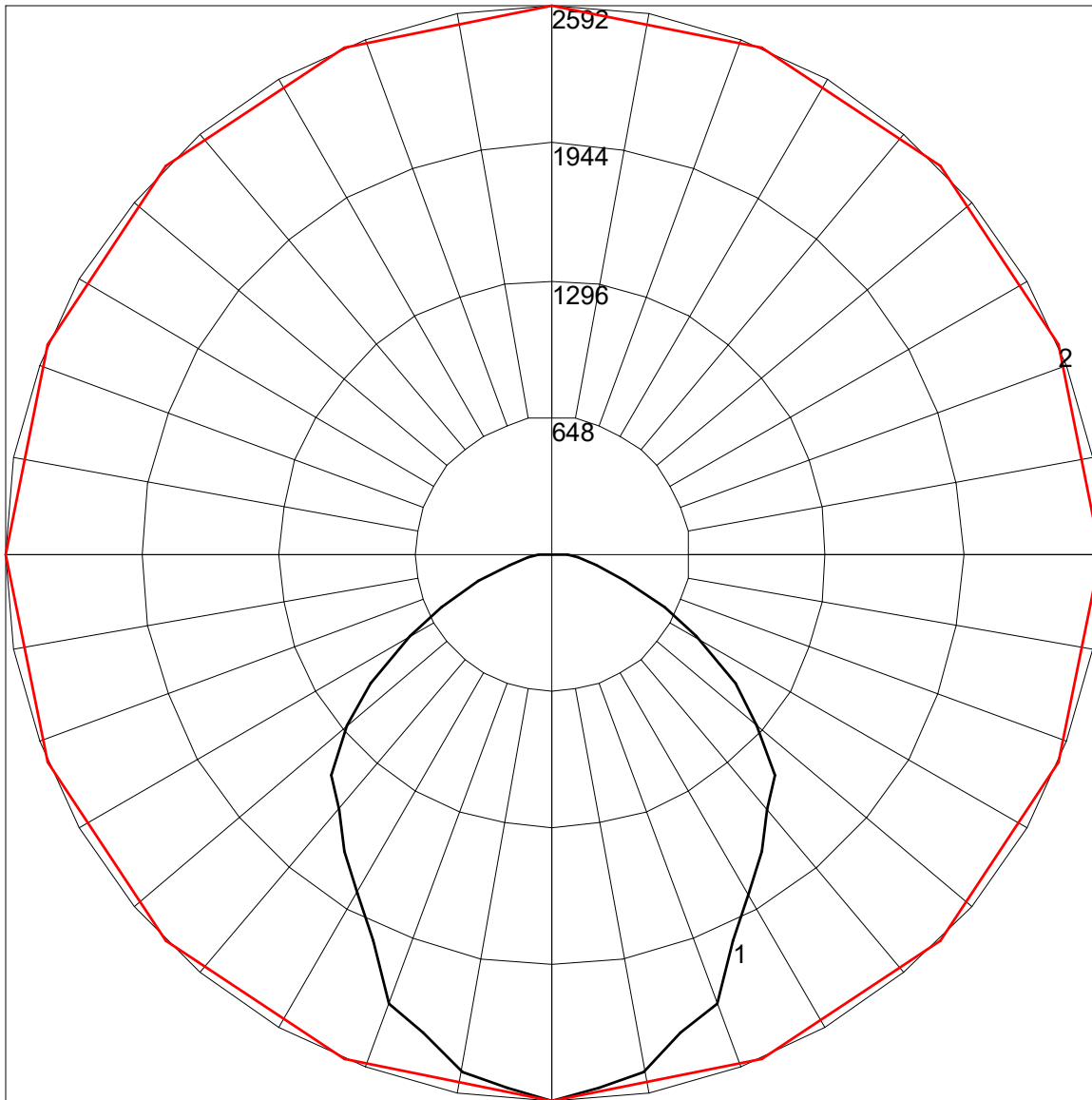
X=2H	Y=2H	16.1	17.7	16.4	18.0	18.3	16.3	17.9	16.7	18.2	18.5
	3H	17.7	19.1	18.1	19.5	19.8	17.5	18.9	17.8	19.2	19.6
	4H	18.2	19.6	18.6	19.9	20.3	17.7	19.1	18.1	19.4	19.8
	6H	18.6	19.9	19.1	20.2	20.6	17.9	19.2	18.3	19.5	19.9
	8H	18.8	20.0	19.2	20.3	20.7	18.0	19.2	18.4	19.5	19.9
	12H	18.9	20.0	19.3	20.4	20.8	18.0	19.2	18.5	19.5	20.0

### UGR Viewed Endwise

4H	2H	16.8	18.1	17.2	18.4	18.8	16.9	18.2	17.3	18.6	19.0
	3H	18.6	19.7	19.0	20.1	20.5	18.2	19.3	18.6	19.7	20.1
	4H	19.2	20.2	19.7	20.6	21.1	18.6	19.6	19.0	20.0	20.4
	6H	19.7	20.6	20.2	21.1	21.5	18.9	19.7	19.3	20.2	20.6
	8H	19.9	20.7	20.4	21.2	21.6	19.0	19.8	19.4	20.2	20.7
	12H	20.1	20.8	20.5	21.3	21.7	19.0	19.8	19.5	20.2	20.7
8H	4H	19.4	20.2	19.9	20.7	21.1	18.8	19.6	19.3	20.1	20.6
	6H	20.0	20.7	20.5	21.2	21.7	19.2	19.8	19.7	20.3	20.8
	8H	20.3	20.9	20.8	21.4	21.9	19.3	19.9	19.8	20.4	20.9
	12H	20.5	21.0	21.0	21.5	22.1	19.5	20.0	20.0	20.5	21.1
12H	4H	19.4	20.1	19.9	20.6	21.1	18.9	19.6	19.3	20.1	20.5
	6H	20.1	20.7	20.6	21.1	21.7	19.2	19.8	19.8	20.3	20.8
	8H	20.3	20.9	20.9	21.4	21.9	19.4	20.0	19.9	20.4	21.0

Maximum UGR = 22.1

POLAR GRAPH



Maximum Candela = 2591.703 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.)