



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AMD4AERNG-L44-835-A-AMBIENT ONLY_.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] 31-JUL-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 2x4' MULTI COMPARTMENT LED TROFFER
 [MORE] FROSTED ACRYLIC DIFFUSER
 [LUMCAT] AMD4AERNG-L44-835-A-AMBIENT 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	4523
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
Total Luminaire Watts	37
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.32
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	1933	2176	2385
55	1557	1874	2058
65	1244	1601	1475
75	927	1064	864
85	748	680	527

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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	1874.760	1874.760	1874.760	1874.760	1874.760	1874.760	1874.760	1874.760	1874.760
5	1865.453	1861.317	1861.317	1862.351	1868.555	1871.658	1874.760	1875.794	1877.862
10	1802.375	1805.478	1813.750	1826.159	1837.534	1847.874	1856.147	1858.215	1858.215
15	1709.309	1717.582	1737.229	1764.115	1782.728	1796.171	1803.409	1806.512	1806.512
20	1646.231	1656.572	1689.662	1723.786	1752.740	1770.319	1776.524	1771.353	1766.183
25	1494.224	1510.769	1549.029	1589.358	1624.516	1643.129	1643.129	1630.721	1621.414
30	1364.966	1385.647	1438.384	1494.224	1534.552	1558.336	1556.268	1536.621	1519.041
35	1238.810	1267.764	1326.705	1388.749	1423.908	1450.793	1446.657	1417.703	1398.056
40	1084.734	1122.995	1188.141	1253.287	1289.479	1306.024	1295.683	1256.389	1227.435
45	954.442	996.839	1074.394	1135.403	1177.800	1190.209	1166.425	1119.892	1079.564
50	783.821	825.184	906.875	961.680	1003.043	1013.384	987.532	932.727	890.330
55	623.541	668.006	750.731	799.332	824.150	846.899	829.320	765.208	722.811
60	481.874	526.339	600.792	625.609	624.575	657.665	675.244	609.064	564.599
65	367.093	413.626	472.568	458.091	435.341	481.874	533.578	478.772	435.341
70	260.584	300.913	327.799	281.266	270.925	299.879	365.025	348.480	306.083
75	167.519	196.472	192.336	162.348	156.144	171.655	209.915	228.528	191.302
80	100.304	115.815	104.441	87.896	82.725	90.998	110.645	124.088	106.509
85	45.499	49.635	41.363	35.158	32.056	32.056	38.260	41.363	39.294
90	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	679.65	N.A.	15.00
0-30	1418.96	N.A.	31.40
0-40	2278.14	N.A.	50.40
0-60	3812.97	N.A.	84.30
0-80	4473.89	N.A.	98.90
0-90	4523.03	N.A.	100.00
10-90	4345.82	N.A.	96.10
20-40	1598.49	N.A.	35.30
20-50	2445.22	N.A.	54.10
40-70	1988.4	N.A.	44.00
60-80	660.91	N.A.	14.60
70-80	207.35	N.A.	4.60
80-90	49.15	N.A.	1.10
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	4523.03	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	177.21
10-20	502.44
20-30	739.31
30-40	859.18
40-50	846.73
50-60	688.11
60-70	453.57
70-80	207.35
80-90	49.15
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	98	107	103	100	96	99	96	93	95	93	91	91	90	88	86
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54
5	78	66	57	51	76	65	57	51	63	56	50	61	54	50	59	53	49	47
6	72	60	51	45	70	59	50	45	57	50	44	55	49	44	54	48	43	41
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	34	29	54	42	34	29	41	34	29	40	33	29	39	33	29	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	13.4	14.9	13.7	15.2	15.6	14.9	16.4	15.2	16.7	17.1
	3H	14.8	16.2	15.1	16.5	16.9	15.9	17.3	16.3	17.6	18.0
	4H	15.2	16.5	15.6	16.9	17.3	16.2	17.5	16.6	17.8	18.2
	6H	15.5	16.7	15.9	17.1	17.5	16.3	17.5	16.7	17.9	18.3
	8H	15.6	16.8	16.1	17.2	17.6	16.4	17.5	16.8	17.9	18.3
	12H	15.7	16.8	16.1	17.2	17.6	16.4	17.5	16.8	17.9	18.3

UGR Viewed Endwise

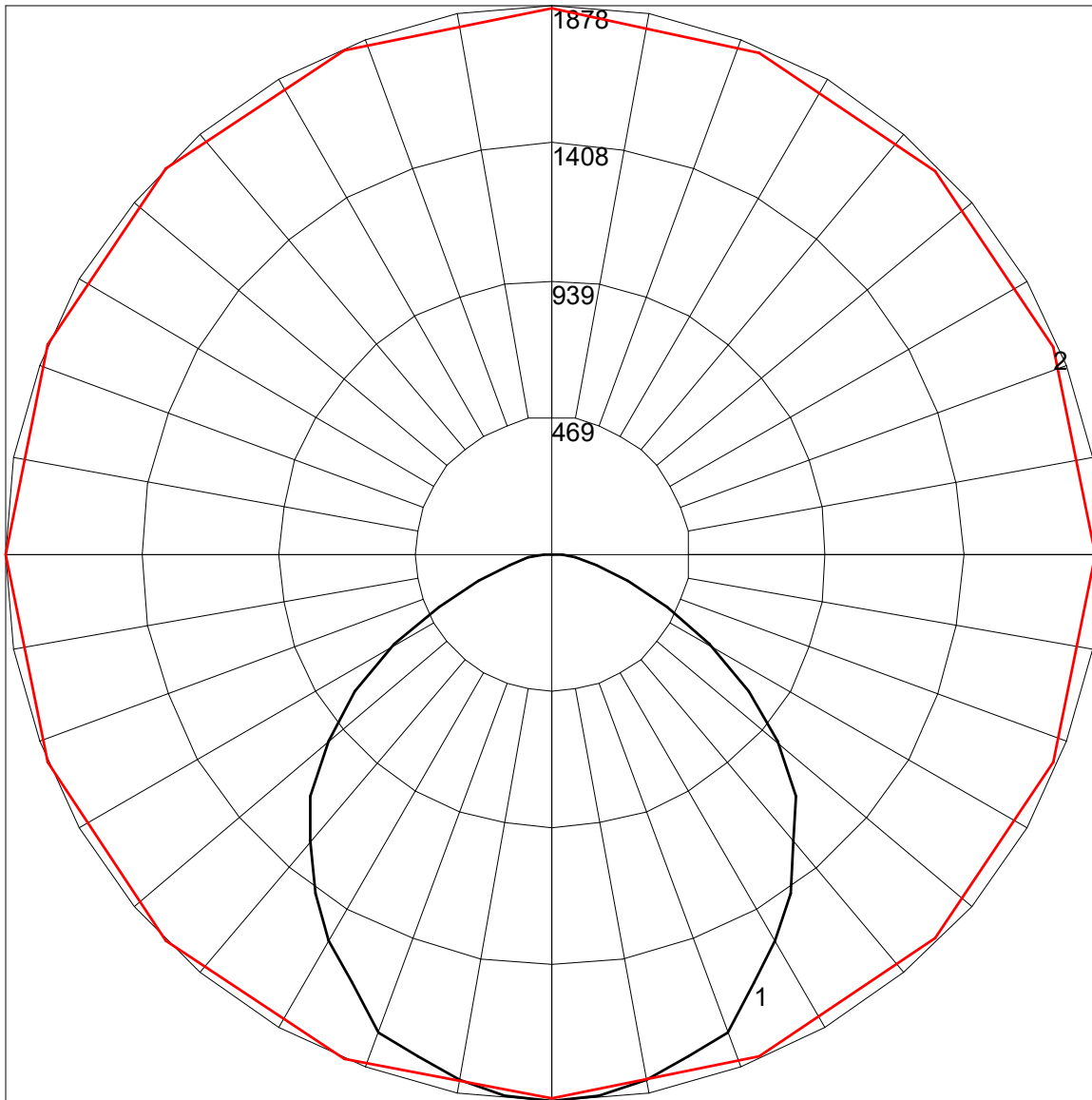
4H	2H	14.1	15.4	14.5	15.8	16.2	15.4	16.7	15.8	17.1	17.4
	3H	15.7	16.8	16.1	17.2	17.6	16.6	17.7	17.0	18.1	18.5
	4H	16.3	17.3	16.7	17.7	18.1	17.0	17.9	17.4	18.4	18.8
	6H	16.7	17.6	17.2	18.0	18.5	17.2	18.0	17.6	18.5	18.9
	8H	16.8	17.6	17.3	18.1	18.5	17.2	18.0	17.7	18.5	18.9
	12H	16.9	17.7	17.4	18.1	18.6	17.3	18.0	17.8	18.5	18.9

8H	4H	16.5	17.3	17.0	17.7	18.2	17.2	17.9	17.6	18.4	18.9
	6H	17.0	17.7	17.5	18.2	18.7	17.4	18.1	17.9	18.6	19.1
	8H	17.2	17.8	17.7	18.3	18.8	17.5	18.1	18.0	18.6	19.1
	12H	17.4	17.9	17.9	18.4	19.0	17.6	18.1	18.1	18.6	19.2

12H	4H	16.5	17.2	17.0	17.7	18.2	17.2	17.9	17.6	18.4	18.8
	6H	17.1	17.7	17.6	18.1	18.7	17.5	18.1	18.0	18.5	19.1
	8H	17.3	17.8	17.8	18.3	18.9	17.6	18.1	18.1	18.6	19.2

Maximum UGR = 19.2

POLAR GRAPH



Maximum Candela = 1877.862 Located At Horizontal Angle = 180, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)