



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AMD4AERNG-L44-835-A-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] 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-EXAM 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	8111
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	63.3
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	3946	4026	4039
55	3310	3619	3556
65	2839	3169	2671
75	2267	2127	1560
85	1933	1667	1467

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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	3480.923	3480.923	3480.923	3480.923	3480.923	3480.923	3480.923	3480.923	3480.923
5	3418.040	3414.997	3412.968	3407.897	3403.840	3402.826	3407.897	3407.897	3407.897
10	3396.740	3391.669	3373.412	3357.184	3348.056	3355.156	3368.341	3373.412	3377.469
15	3235.474	3230.402	3200.989	3169.547	3162.447	3173.604	3191.861	3217.217	3226.345
20	3180.704	3159.404	3107.677	3062.036	3046.822	3056.965	3086.378	3137.091	3154.333
25	2849.042	2826.729	2776.016	2732.403	2710.089	2716.175	2760.802	2811.515	2824.700
30	2647.206	2623.878	2571.137	2521.438	2494.053	2506.224	2559.980	2601.564	2616.778
35	2435.226	2422.041	2378.428	2334.815	2315.544	2331.772	2366.257	2393.642	2404.799
40	2168.477	2168.477	2150.221	2128.921	2123.850	2130.950	2128.921	2139.064	2133.993
45	1948.384	1966.641	1987.940	1994.025	1994.025	1987.940	1957.512	1937.227	1910.857
50	1606.580	1641.065	1694.820	1720.177	1703.948	1697.863	1671.492	1615.708	1575.138
55	1325.631	1373.301	1449.370	1453.427	1424.014	1433.142	1433.142	1344.902	1293.175
60	1040.626	1102.495	1172.479	1110.609	1055.840	1110.609	1156.251	1076.125	1014.255
65	837.775	908.773	935.143	832.703	788.076	841.832	911.815	880.373	811.404
70	614.639	678.537	637.966	541.612	500.028	539.584	619.710	660.280	591.311
75	409.759	441.201	384.403	312.391	281.963	302.248	374.260	428.016	391.502
80	254.578	258.635	211.979	178.509	166.338	173.438	207.922	242.407	239.364
85	117.654	108.525	101.426	93.311	89.254	92.297	95.340	95.340	106.497
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	1233.58	N.A.	15.20
0-30	2524.85	N.A.	31.10
0-40	4003.97	N.A.	49.40
0-60	6745.91	N.A.	83.20
0-80	8000.51	N.A.	98.60
0-90	8111.49	N.A.	100.00
10-90	7786.64	N.A.	96.00
20-40	2770.4	N.A.	34.20
20-50	4266.1	N.A.	52.60
40-70	3590.53	N.A.	44.30
60-80	1254.6	N.A.	15.50
70-80	406.00	N.A.	5.00
80-90	110.98	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	8111.49	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	324.84
10-20	908.73
20-30	1291.27
30-40	1479.13
40-50	1495.7
50-60	1246.24
60-70	848.60
70-80	406.00
80-90	110.98
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	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	72	64	58	69	62	57	67	61	56	65	60	55	53
5	78	65	57	50	76	64	56	50	62	55	50	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	35	33
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27

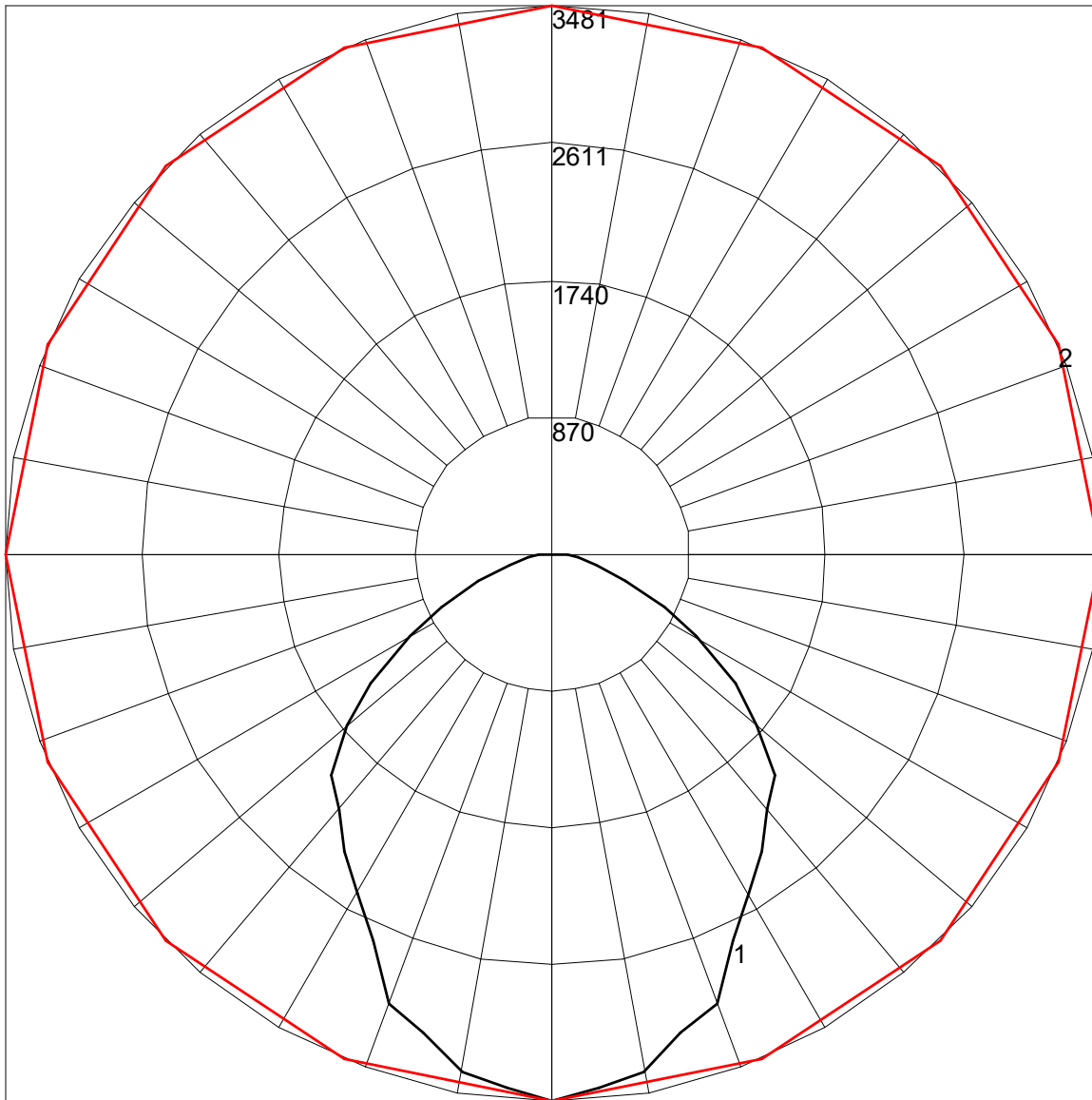
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UGR TABLE - CORRECTED

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					UGR Viewed Endwise				
X=2H	Y=2H	16.5	18.1	16.9	18.4	18.7	16.7	18.3	17.1	18.6	18.9
	3H	18.1	19.5	18.5	19.9	20.2	17.9	19.3	18.2	19.6	20.0
	4H	18.7	20.0	19.1	20.3	20.7	18.1	19.5	18.5	19.8	20.2
	6H	19.1	20.3	19.5	20.7	21.1	18.3	19.6	18.7	19.9	20.3
	8H	19.2	20.4	19.6	20.8	21.2	18.4	19.6	18.8	20.0	20.4
	12H	19.3	20.4	19.7	20.8	21.2	18.5	19.6	18.9	20.0	20.4
4H	2H	17.2	18.5	17.6	18.9	19.2	17.3	18.7	17.7	19.0	19.4
	3H	19.0	20.1	19.4	20.5	20.9	18.7	19.8	19.1	20.2	20.6
	4H	19.6	20.6	20.1	21.1	21.5	19.0	20.0	19.4	20.4	20.9
	6H	20.2	21.0	20.6	21.5	21.9	19.3	20.1	19.7	20.6	21.0
	8H	20.3	21.2	20.8	21.6	22.1	19.4	20.2	19.8	20.6	21.1
	12H	20.5	21.2	21.0	21.7	22.1	19.5	20.2	19.9	20.7	21.1
8H	4H	19.8	20.6	20.3	21.1	21.5	19.2	20.1	19.7	20.5	21.0
	6H	20.4	21.1	20.9	21.6	22.1	19.6	20.3	20.1	20.8	21.2
	8H	20.7	21.3	21.2	21.8	22.3	19.8	20.3	20.3	20.9	21.3
	12H	20.9	21.4	21.4	21.9	22.5	19.9	20.4	20.4	20.9	21.5
12H	4H	19.8	20.6	20.3	21.0	21.5	19.3	20.0	19.8	20.5	20.9
	6H	20.5	21.1	21.0	21.5	22.1	19.7	20.3	20.2	20.7	21.3
	8H	20.8	21.3	21.3	21.8	22.4	19.8	20.4	20.3	20.9	21.4

Maximum UGR = 22.5

POLAR GRAPH



Maximum Candela = 3480.923 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.)