



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AMD2ARNG-L27-835-A-DIM-UNV AMBIENT AND READING ONLY_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TESTLAB] GEN from Intertek
 [ISSUEDATE] 18-AUG-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.64836
 [LUMINAIRE] 2X2' LED TROFFER
 [MORE] FROSTED ACRYLIC DIFFUSER
 [LUMCAT] AMD2ARG-L27-835-A-DIM-UNV AMBIENT ONLY
 [LAMPCAT] HLM 80 CRI, 3500K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] INDOOR,DIRECT, OFFICE, EDUCATION
 [_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4451
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	121
Total Luminaire Watts	36.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.52
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 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	6536	5441	3994
55	6398	5135	3357
65	5094	4562	2722
75	2921	3155	2074
85	888	1390	1481

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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	1786.520	1786.520	1786.520	1786.520	1786.520	1786.520	1786.520	1786.520	1786.520
5	1861.188	1858.804	1842.637	1819.989	1793.884	1761.119	1733.161	1715.246	1707.301
10	1898.829	1890.245	1853.081	1803.859	1750.750	1690.251	1640.325	1609.325	1594.153
15	1931.002	1915.937	1863.540	1792.964	1713.565	1629.782	1561.964	1519.343	1501.358
20	1911.209	1882.116	1807.428	1710.241	1598.560	1496.452	1414.965	1366.750	1347.302
25	1875.877	1841.696	1749.301	1635.963	1510.986	1395.322	1311.395	1261.264	1243.805
30	1840.661	1788.286	1672.140	1528.401	1389.564	1262.972	1176.397	1133.493	1119.768
35	1788.115	1725.339	1588.768	1428.845	1281.070	1154.121	1069.271	1036.464	1023.845
40	1682.432	1607.567	1450.796	1277.657	1122.411	1004.999	935.430	911.462	907.834
45	1579.248	1494.942	1314.743	1122.364	965.132	859.001	806.607	795.738	795.355
50	1428.823	1343.501	1160.286	965.079	808.680	722.372	686.232	688.708	687.275
55	1253.977	1175.899	1006.554	803.190	658.064	594.565	574.845	576.876	570.266
60	1002.022	952.492	841.650	652.000	518.916	470.227	467.778	438.159	421.590
65	735.635	716.951	658.804	516.425	393.185	362.538	352.063	310.029	286.369
70	466.425	467.820	460.108	382.775	277.807	264.003	238.057	196.195	179.307
75	258.345	265.099	279.068	254.021	183.411	171.397	142.738	117.409	110.655
80	113.001	123.515	142.003	139.870	107.727	96.492	79.003	69.809	67.558
85	26.444	29.860	41.407	50.511	44.105	39.150	35.210	32.959	28.510
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	0.056	0.000	0.056	0.000	0.000	0.000	0.056	0.000	0.056
155	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160	0.056	0.113	0.169	0.000	0.056	0.000	0.169	0.113	0.056
165	0.225	0.113	0.169	0.056	0.056	0.056	0.169	0.113	0.225
170	0.113	0.113	0.169	0.056	0.056	0.056	0.169	0.113	0.113
175	0.225	0.169	0.113	0.000	0.169	0.000	0.113	0.169	0.225
180	0.169	0.169	0.169	0.169	0.169	0.169	0.169	0.169	0.169

IES INDOOR REPORT**PHOTOMETRIC FILENAME : AMD2ARNG-L27-835-A-DIM-UNV AMBIENT AND READING ONLY_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	648.86	N.A.	14.60
0-30	1353.72	N.A.	30.40
0-40	2184.18	N.A.	49.10
0-60	3709.27	N.A.	83.30
0-80	4401.75	N.A.	98.90
0-90	4451.08	N.A.	100.00
10-90	4281.83	N.A.	96.20
20-40	1535.32	N.A.	34.50
20-50	2359.02	N.A.	53.00
40-70	1998.29	N.A.	44.90
60-80	692.48	N.A.	15.60
70-80	219.29	N.A.	4.90
80-90	49.33	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	0.06	N.A.	0.00
110-180	0.06	N.A.	0.00
0-180	4451.14	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	169.26
10-20	479.60
20-30	704.87
30-40	830.45
40-50	823.70
50-60	701.40
60-70	473.20
70-80	219.29
80-90	49.33
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	0.01
160-170	0.03
170-180	0.01

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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	88	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	74	69	65	72	67	64	62
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53
5	78	65	57	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	53	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	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	26

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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	19.7	21.3	20.1	21.6	21.9	16.0	17.5	16.3	17.9	18.2
	3H	21.0	22.4	21.4	22.7	23.1	17.4	18.8	17.8	19.1	19.5
	4H	21.3	22.6	21.7	23.0	23.3	17.8	19.2	18.2	19.5	19.9
	6H	21.4	22.7	21.8	23.0	23.4	18.2	19.4	18.6	19.8	20.2
	8H	21.5	22.6	21.9	23.0	23.4	18.3	19.4	18.7	19.8	20.2
	12H	21.4	22.6	21.9	22.9	23.4	18.3	19.4	18.7	19.8	20.3

UGR Viewed Endwise

4H	2H	20.1	21.4	20.5	21.8	22.2	16.8	18.1	17.2	18.5	18.9
	3H	21.6	22.7	22.0	23.1	23.5	18.4	19.5	18.8	19.9	20.3
	4H	22.0	23.0	22.4	23.4	23.8	19.0	20.0	19.4	20.4	20.8
	6H	22.2	23.0	22.6	23.5	23.9	19.4	20.3	19.9	20.7	21.2
	8H	22.2	23.0	22.7	23.5	23.9	19.5	20.3	20.0	20.8	21.2
	12H	22.2	22.9	22.7	23.4	23.9	19.6	20.3	20.1	20.8	21.3

8H	4H	22.1	22.9	22.6	23.4	23.8	19.3	20.1	19.7	20.5	21.0
	6H	22.4	23.0	22.9	23.5	24.0	19.8	20.4	20.3	20.9	21.4
	8H	22.4	23.0	22.9	23.5	24.0	19.9	20.5	20.5	21.1	21.5
	12H	22.4	23.0	22.9	23.5	24.0	20.1	20.6	20.6	21.1	21.7

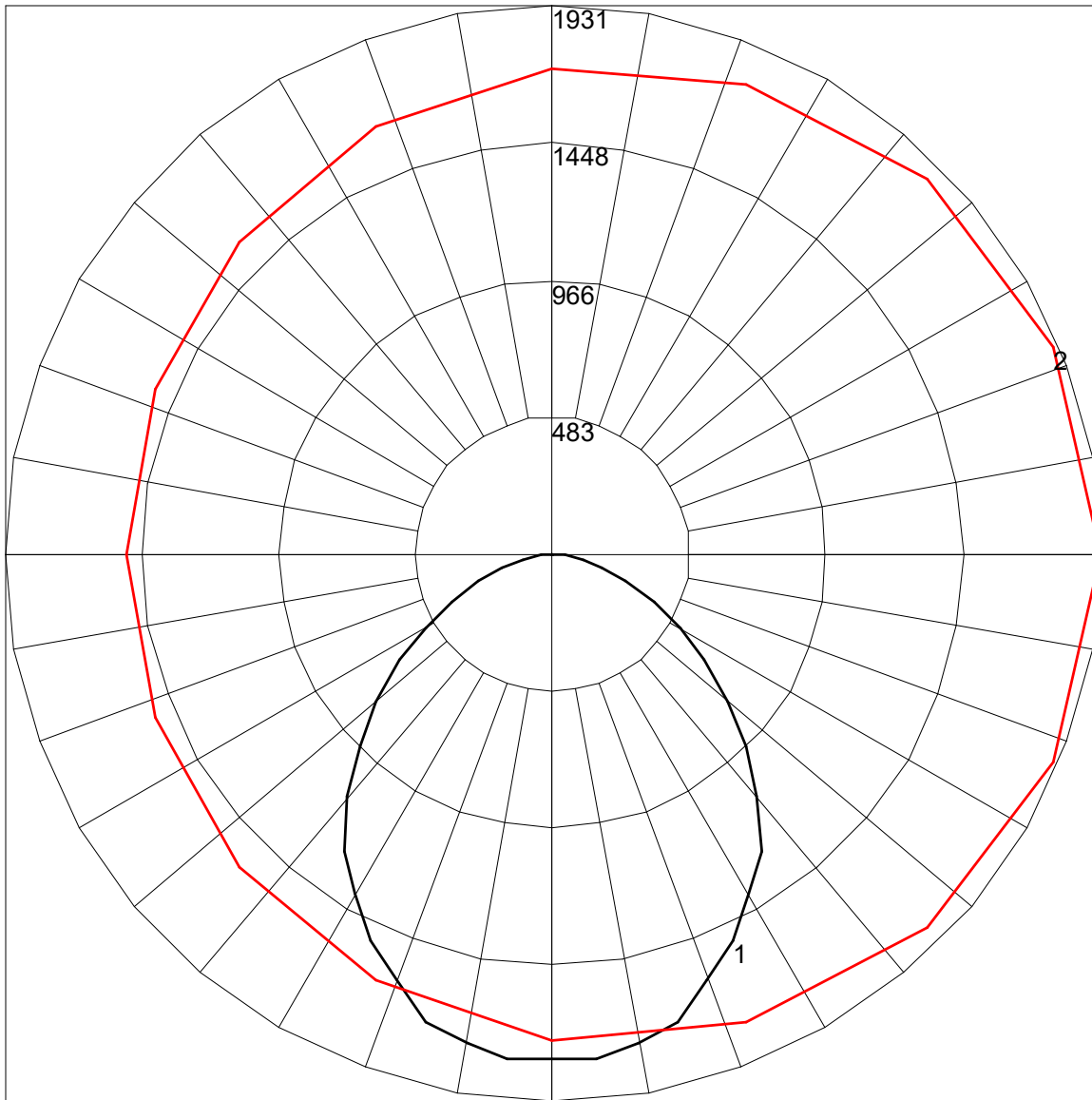
12H	4H	22.1	22.8	22.6	23.3	23.8	19.3	20.0	19.7	20.5	20.9
	6H	22.4	23.0	22.9	23.4	24.0	19.8	20.4	20.3	20.9	21.4
	8H	22.5	23.0	23.0	23.5	24.0	20.0	20.5	20.5	21.0	21.6

Maximum UGR = 24.0

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POLAR GRAPH



Maximum Candela = 1931.002 Located At Horizontal Angle = 0, Vertical Angle = 15

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

2 - Horizontal Cone Through Vertical Angle (15) (Through Max. Cd.)