



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AMD2ARG-P31-8TW-A-POE 4000K AMBIENT ONLY\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TESTLAB] GEN from Intertek  
 [ISSUEDATE] 25-AUG-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.64836  
 [LUMINAIRE] 2X2' LED TROFFER  
 [MORE] FROSTED ACRYLIC DIFFUSER  
 [LUMCAT] AMD2ARG-P31-8TW-A-PoE 4000k AMBIENT ONLY  
 [ \_SEARCH\_SOURCE] 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	3142
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	113
Total Luminaire Watts	27.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.26
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	3079	3077	3191
55	2556	2754	2855
65	1992	2291	1889
75	1481	1476	1097
85	951	726	586

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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>
0.0	1369.479	1369.479	1369.479	1369.479	1369.479
2.5	1368.633	1366.092	1364.920	1367.916	1369.544
5.0	1364.855	1361.598	1359.123	1359.905	1361.468
7.5	1356.583	1351.828	1348.441	1347.530	1345.771
10.0	1343.622	1338.150	1331.767	1329.358	1327.338
12.5	1326.036	1320.304	1311.902	1306.561	1302.328
15.0	1302.979	1296.856	1286.500	1279.010	1273.734
17.5	1275.428	1267.742	1256.279	1247.811	1241.754
20.0	1242.796	1234.590	1221.563	1212.379	1205.410
22.5	1205.671	1196.487	1183.070	1174.081	1167.503
25.0	1165.354	1154.607	1139.952	1132.136	1126.274
27.5	1122.301	1110.186	1095.466	1089.800	1085.501
30.0	1077.424	1064.789	1050.655	1046.421	1043.686
32.5	1029.682	1016.916	1004.020	1002.652	1000.828
35.0	978.162	966.308	955.366	958.036	957.776
37.5	923.190	912.769	904.562	910.099	911.988
40.0	866.264	857.081	851.870	861.184	865.353
42.5	806.082	799.243	797.940	811.683	819.304
45.0	744.010	739.516	743.424	761.922	771.040
47.5	682.134	681.678	689.169	712.616	722.973
50.0	620.323	624.427	637.584	664.353	671.062
52.5	559.945	568.217	588.018	613.875	617.458
55.0	501.000	513.571	539.754	558.838	559.555
57.5	444.140	459.967	491.556	498.851	482.894
60.0	388.972	407.926	440.948	424.600	410.205
62.5	336.280	358.099	389.103	359.402	339.146
65.0	287.691	311.985	330.939	295.442	272.841
67.5	242.684	268.281	273.232	234.478	215.263
70.0	201.976	227.834	221.712	182.827	166.870
72.5	164.525	188.494	173.253	139.254	127.465
75.0	130.982	149.349	130.526	104.798	96.983
77.5	100.369	112.093	94.247	77.638	72.949
80.0	73.274	79.397	65.133	55.688	53.083
82.5	49.305	50.282	41.229	36.344	34.195
85.0	28.333	26.183	21.624	19.019	17.456
87.5	9.965	8.272	7.555	7.686	7.621
90.0	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000

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135.0	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.065	0.000	0.065
152.5	0.000	0.000	0.065	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000
157.5	0.130	0.065	0.000	0.261	0.065
160.0	0.065	0.000	0.195	0.130	0.065
162.5	0.261	0.065	0.065	0.065	0.195
165.0	0.065	0.065	0.195	0.130	0.261
167.5	0.261	0.065	0.130	0.130	0.065
170.0	0.065	0.065	0.195	0.130	0.130
172.5	0.000	0.065	0.261	0.326	0.000
175.0	0.195	0.000	0.130	0.195	0.261
177.5	0.195	0.130	0.195	0.195	0.065
180.0	0.195	0.195	0.195	0.195	0.195

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : AMD2ARG-P31-8TW-A-POE 4000K AMBIENT ONLY\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	491.48	N.A.	15.60
0-30	1017.72	N.A.	32.40
0-40	1618.41	N.A.	51.50
0-60	2674.44	N.A.	85.10
0-80	3113.29	N.A.	99.10
0-90	3142.07	N.A.	100.00
10-90	3013.03	N.A.	95.90
20-40	1126.93	N.A.	35.90
20-50	1706.15	N.A.	54.30
40-70	1359.45	N.A.	43.30
60-80	438.85	N.A.	14.00
70-80	135.43	N.A.	4.30
80-90	28.78	N.A.	0.90
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	0.07	N.A.	0.00
110-180	0.07	N.A.	0.00
0-180	3142.14	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	129.04
10-20	362.44
20-30	526.24
30-40	600.69
40-50	579.22
50-60	476.81
60-70	303.42
70-80	135.43
80-90	28.78
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	0.02
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	138	138	138	138	135	135	135	135	129	129	129	123	123	123	118	118	118	116
1	127	122	118	114	124	120	116	112	115	111	108	110	108	105	106	104	102	100
2	117	108	101	95	114	106	99	94	102	96	91	98	93	89	95	91	87	85
3	107	96	87	80	104	94	86	79	91	84	78	87	82	77	85	80	75	73
4	98	85	76	69	96	84	75	68	81	73	67	78	72	66	76	70	66	63
5	91	77	67	60	89	76	66	59	73	65	59	71	64	58	69	63	58	55
6	84	70	60	53	82	68	59	52	66	58	52	65	57	51	63	56	51	49
7	78	63	54	47	76	62	53	47	61	52	46	59	52	46	57	51	46	43
8	73	58	49	42	71	57	48	42	56	47	42	54	47	41	53	46	41	39
9	68	53	44	38	67	53	44	38	51	43	38	50	43	38	49	42	37	35
10	64	49	41	35	63	49	40	35	48	40	34	47	39	34	46	39	34	32

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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

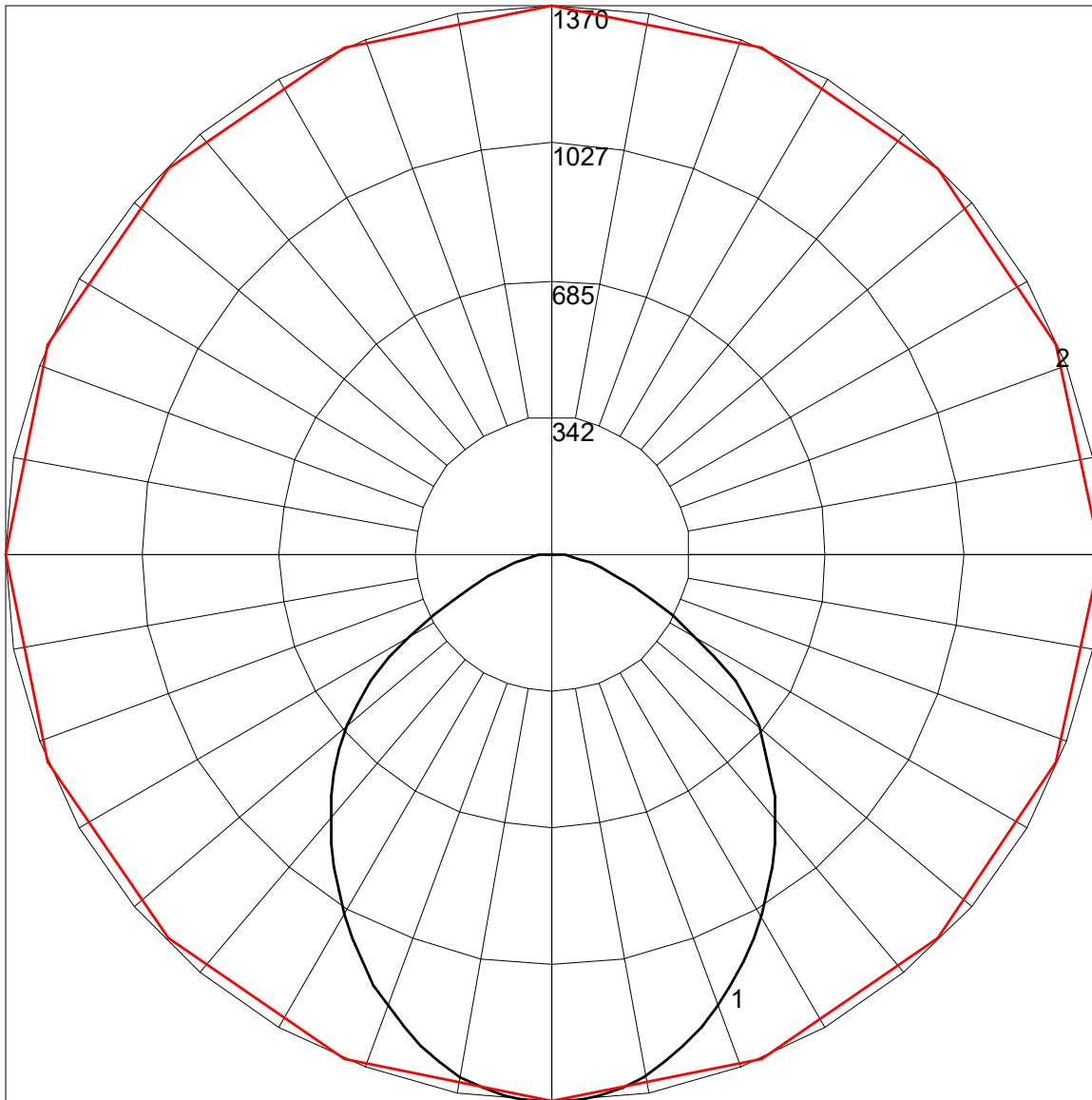
X=2H	Y=2H	14.5	16.1	14.9	16.4	16.7	15.1	16.6	15.4	16.9	17.2
	3H	15.9	17.3	16.2	17.6	17.9	15.9	17.3	16.3	17.6	18.0
	4H	16.3	17.6	16.7	18.0	18.3	16.1	17.4	16.5	17.8	18.2
	6H	16.6	17.8	17.0	18.2	18.6	16.3	17.5	16.7	17.8	18.2
	8H	16.7	17.8	17.1	18.2	18.6	16.3	17.4	16.7	17.8	18.2
	12H	16.7	17.8	17.1	18.2	18.6	16.3	17.4	16.7	17.8	18.2

### UGR Viewed Endwise

4H	2H	15.1	16.4	15.5	16.8	17.2	15.6	16.9	16.0	17.2	17.6
	3H	16.7	17.7	17.1	18.1	18.6	16.6	17.7	17.0	18.1	18.5
	4H	17.2	18.2	17.7	18.6	19.1	16.9	17.9	17.3	18.3	18.7
	6H	17.6	18.5	18.1	18.9	19.4	17.1	17.9	17.5	18.4	18.8
	8H	17.7	18.5	18.2	19.0	19.4	17.1	17.9	17.6	18.4	18.8
	12H	17.8	18.5	18.3	19.0	19.4	17.1	17.9	17.6	18.3	18.8
8H	4H	17.4	18.2	17.8	18.6	19.1	17.1	17.9	17.5	18.3	18.8
	6H	17.8	18.5	18.3	19.0	19.5	17.3	18.0	17.8	18.5	18.9
	8H	18.0	18.6	18.5	19.1	19.6	17.4	18.0	17.9	18.5	19.0
	12H	18.1	18.6	18.6	19.1	19.7	17.4	18.0	18.0	18.5	19.0
12H	4H	17.4	18.1	17.9	18.6	19.0	17.1	17.8	17.6	18.3	18.7
	6H	17.9	18.4	18.4	18.9	19.5	17.4	17.9	17.9	18.4	18.9
	8H	18.0	18.6	18.5	19.0	19.6	17.5	18.0	18.0	18.5	19.0

Maximum UGR = 19.7

POLAR GRAPH



Maximum Candela = 1369.544 Located At Horizontal Angle = 90, Vertical Angle = 2.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)