



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AMD2ARG-L44-8TW-A-DALI-UNV 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-L44-8TW-A-DALI-UNV 4000k AMBIENT ONLY
 [_SEARCH_SOURCE TYPE] 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	4498
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	43.1
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	4408	4404	4568
55	3659	3942	4087
65	2852	3280	2705
75	2120	2113	1570
85	1362	1039	839

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0.0	1960.509	1960.509	1960.509	1960.509	1960.509
2.5	1959.297	1955.660	1953.982	1958.271	1960.602
5.0	1953.889	1949.227	1945.683	1946.802	1949.040
7.5	1942.047	1935.240	1930.392	1929.086	1926.569
10.0	1923.492	1915.659	1906.522	1903.072	1900.181
12.5	1898.316	1890.111	1878.083	1870.437	1864.376
15.0	1865.309	1856.544	1841.718	1830.996	1823.443
17.5	1825.867	1814.865	1798.454	1786.333	1777.661
20.0	1779.153	1767.404	1748.756	1735.609	1725.632
22.5	1726.005	1712.858	1693.650	1680.782	1671.365
25.0	1668.288	1652.903	1631.924	1620.735	1612.343
27.5	1606.655	1589.312	1568.239	1560.127	1553.973
30.0	1542.411	1524.322	1504.089	1498.028	1494.112
32.5	1474.065	1455.789	1437.327	1435.369	1432.758
35.0	1400.310	1383.340	1367.675	1371.498	1371.125
37.5	1321.614	1306.695	1294.947	1302.872	1305.576
40.0	1240.120	1226.973	1219.514	1232.847	1238.815
42.5	1153.964	1144.174	1142.309	1161.983	1172.893
45.0	1065.105	1058.671	1064.266	1090.746	1103.800
47.5	976.525	975.872	986.595	1020.162	1034.988
50.0	888.038	893.912	912.747	951.070	960.674
52.5	801.603	813.444	841.790	878.807	883.935
55.0	717.218	735.214	772.697	800.017	801.043
57.5	635.818	658.476	703.698	714.141	691.297
60.0	556.842	583.975	631.249	607.845	587.239
62.5	481.409	512.645	557.028	514.510	485.512
65.0	411.850	446.630	473.763	422.946	390.591
67.5	347.420	384.064	391.151	335.672	308.165
70.0	289.144	326.161	317.396	261.731	238.886
72.5	235.530	269.843	248.024	199.352	182.475
75.0	187.510	213.804	186.857	150.027	138.838
77.5	143.686	160.470	134.921	111.145	104.431
80.0	104.897	113.662	93.242	79.722	75.992
82.5	70.584	71.983	59.022	52.029	48.952
85.0	40.560	37.483	30.956	27.227	24.989
87.5	14.266	11.842	10.816	11.003	10.909
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	0.093	0.000	0.093
152.5	0.000	0.000	0.093	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000
157.5	0.186	0.093	0.000	0.373	0.093
160.0	0.093	0.000	0.280	0.186	0.093
162.5	0.373	0.093	0.093	0.093	0.280
165.0	0.093	0.093	0.280	0.186	0.373
167.5	0.373	0.093	0.186	0.186	0.093
170.0	0.093	0.093	0.280	0.186	0.186
172.5	0.000	0.093	0.373	0.466	0.000
175.0	0.280	0.000	0.186	0.280	0.373
177.5	0.280	0.186	0.280	0.280	0.093
180.0	0.280	0.280	0.280	0.280	0.280

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Zone	Lumens	%Lamp	%Fixt
0-20	703.59	N.A.	15.60
0-30	1456.94	N.A.	32.40
0-40	2316.87	N.A.	51.50
0-60	3828.66	N.A.	85.10
0-80	4456.9	N.A.	99.10
0-90	4498.1	N.A.	100.00
10-90	4313.37	N.A.	95.90
20-40	1613.28	N.A.	35.90
20-50	2442.48	N.A.	54.30
40-70	1946.15	N.A.	43.30
60-80	628.24	N.A.	14.00
70-80	193.88	N.A.	4.30
80-90	41.20	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	0.10	N.A.	0.00
110-180	0.10	N.A.	0.00
0-180	4498.2	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	184.73
10-20	518.86
20-30	753.35
30-40	859.93
40-50	829.20
50-60	682.59
60-70	434.36
70-80	193.88
80-90	41.20
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	0.03
160-170	0.05
170-180	0.02

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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	123	123	123	123	120	120	120	120	115	115	115	110	110	110	106	106	106	104
1	114	109	105	102	111	107	104	100	103	100	97	99	96	94	95	93	91	89
2	104	97	90	85	102	95	89	84	91	86	82	88	84	80	85	81	78	76
3	96	86	78	72	93	84	77	71	81	75	70	78	73	69	76	71	67	65
4	88	77	68	61	86	75	67	61	73	66	60	70	64	59	68	63	59	56
5	81	69	60	53	79	68	59	53	65	58	53	63	57	52	62	56	52	49
6	75	62	53	47	73	61	53	47	59	52	46	58	51	46	56	50	46	44
7	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	39
8	65	52	43	38	64	51	43	38	50	43	37	49	42	37	47	41	37	35
9	61	48	40	34	60	47	39	34	46	39	34	45	38	34	44	38	33	32
10	57	44	36	31	56	44	36	31	43	36	31	42	35	31	41	35	31	29

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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	16.5	18.0	18.3	UGR Viewed Endwise	16.7	18.2	17.0	18.5	18.8
	3H	17.5	18.9	17.8	19.2	19.5		17.5	18.9	17.9	19.2	19.6
	4H	17.9	19.2	18.3	19.6	19.9		17.7	19.0	18.1	19.4	19.8
	6H	18.2	19.4	18.6	19.8	20.2		17.9	19.1	18.3	19.4	19.8
	8H	18.3	19.4	18.7	19.8	20.2		17.9	19.0	18.3	19.4	19.8
	12H	18.3	19.4	18.7	19.8	20.2		17.9	19.0	18.3	19.4	19.8

4H	2H	16.7	18.0	17.1	18.4	18.8		17.2	18.5	17.6	18.8	19.2
	3H	18.3	19.4	18.7	19.7	20.2		18.2	19.3	18.6	19.7	20.1
	4H	18.8	19.8	19.3	20.2	20.7		18.5	19.5	18.9	19.9	20.3
	6H	19.2	20.1	19.7	20.5	21.0		18.7	19.5	19.1	20.0	20.4
	8H	19.3	20.1	19.8	20.6	21.0		18.7	19.5	19.2	20.0	20.4
	12H	19.4	20.1	19.9	20.6	21.0		18.7	19.5	19.2	19.9	20.4

8H	4H	19.0	19.8	19.4	20.2	20.7		18.7	19.5	19.1	19.9	20.4
	6H	19.4	20.1	19.9	20.6	21.1		18.9	19.6	19.4	20.1	20.5
	8H	19.6	20.2	20.1	20.7	21.2		19.0	19.6	19.5	20.1	20.6
	12H	19.7	20.2	20.2	20.7	21.3		19.0	19.6	19.6	20.1	20.6

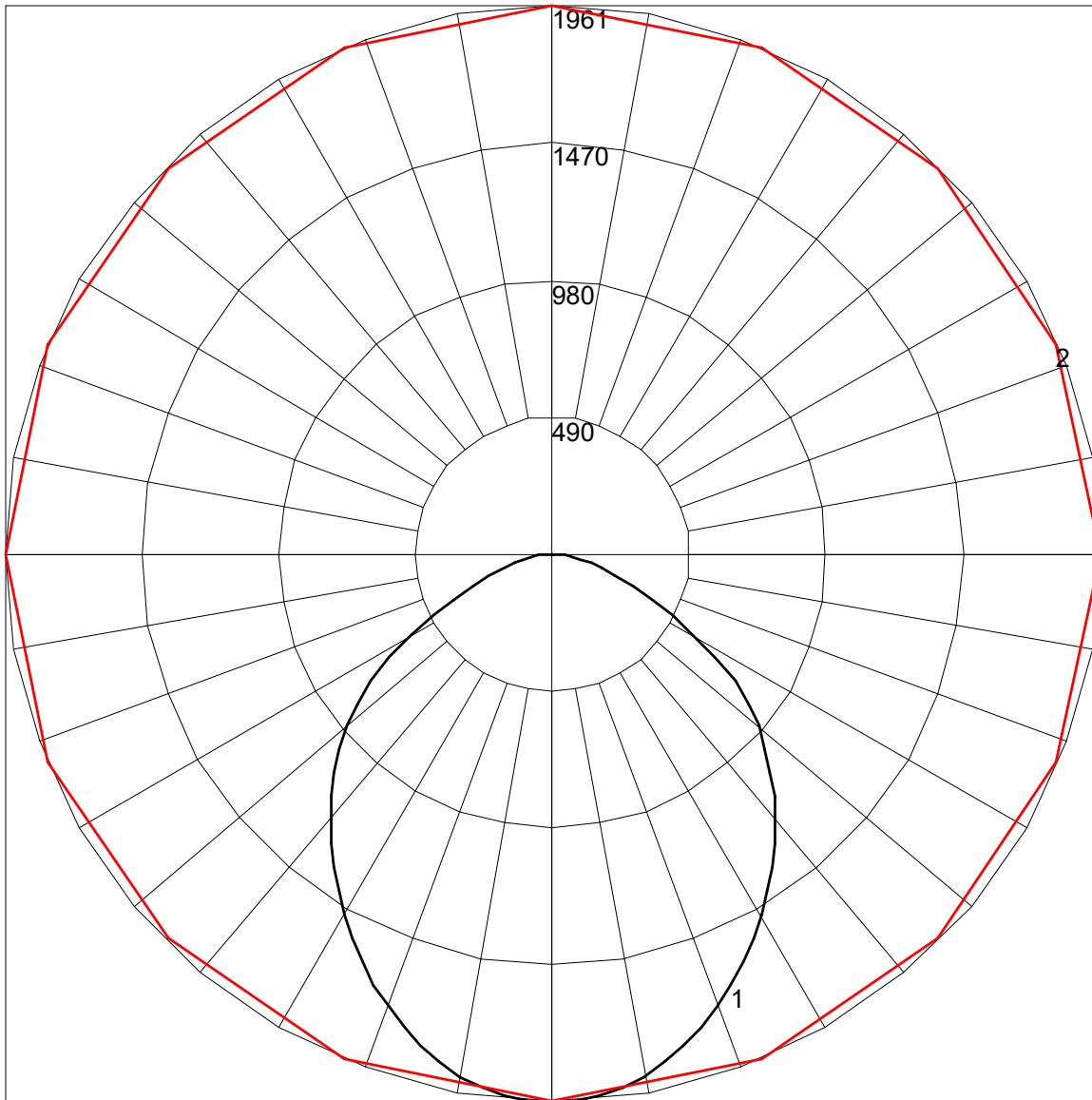
12H	4H	19.0	19.7	19.5	20.2	20.6		18.7	19.4	19.2	19.9	20.3
	6H	19.5	20.1	20.0	20.5	21.1		19.0	19.5	19.5	20.0	20.5
	8H	19.6	20.2	20.1	20.6	21.2		19.1	19.6	19.6	20.1	20.6

Maximum UGR = 21.3

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POLAR GRAPH



Maximum Candela = 1960.602 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.)