



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AMD2ARG-P43-840-A-POE AMBIENT ONLY_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TESTLAB] GEN from Intertek
[ISSUEDATE] 19-AUG-2020
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.64836
[LUMINAIRE] 2X2' LED TROFFER
[MORE] FROSTED ACRYLIC DIFFUSER
[LUMCAT] AMD2ARG-P43-840-A-PoE AMBIENT ONLY
[LAMPCAT] HLM 80 CRI, 4000K CCT
[_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	4327
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	32.5
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	4240	4237	4394
55	3520	3792	3931
65	2743	3156	2602
75	2039	2032	1510
85	1310	1000	807

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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	1885.976	1885.976	1885.976	1885.976	1885.976
2.5	1884.810	1881.312	1879.697	1883.823	1886.066
5.0	1879.608	1875.123	1871.714	1872.791	1874.943
7.5	1868.216	1861.668	1857.004	1855.748	1853.326
10.0	1850.366	1842.832	1834.041	1830.723	1827.942
12.5	1826.148	1818.255	1806.684	1799.329	1793.498
15.0	1794.395	1785.964	1771.702	1761.387	1754.121
17.5	1756.453	1745.869	1730.082	1718.422	1710.080
20.0	1711.515	1700.213	1682.274	1669.626	1660.029
22.5	1660.387	1647.740	1629.262	1616.884	1607.825
25.0	1604.865	1590.065	1569.883	1559.119	1551.046
27.5	1545.575	1528.891	1508.620	1500.816	1494.896
30.0	1483.773	1466.372	1446.908	1441.077	1437.310
32.5	1418.025	1400.445	1382.684	1380.801	1378.289
35.0	1347.075	1330.750	1315.681	1319.358	1318.999
37.5	1271.370	1257.018	1245.717	1253.341	1255.942
40.0	1192.975	1180.327	1173.151	1185.978	1191.719
42.5	1110.094	1100.676	1098.882	1117.808	1128.303
45.0	1024.613	1018.424	1023.805	1049.279	1061.837
47.5	939.400	938.772	949.088	981.379	995.640
50.0	854.277	859.928	878.047	914.913	924.152
52.5	771.128	782.520	809.788	845.397	850.331
55.0	689.952	707.264	743.322	769.603	770.590
57.5	611.646	633.443	676.946	686.992	665.016
60.0	535.672	561.774	607.251	584.737	564.914
62.5	463.107	493.156	535.852	494.950	467.054
65.0	396.193	429.650	455.752	406.867	375.742
67.5	334.212	369.463	376.280	322.910	296.450
70.0	278.151	313.761	305.330	251.780	229.805
72.5	226.575	259.584	238.595	191.773	175.538
75.0	180.381	205.676	179.753	144.323	133.559
77.5	138.224	154.369	129.792	106.919	100.461
80.0	100.910	109.341	89.697	76.691	73.103
82.5	67.901	69.246	56.778	50.051	47.091
85.0	39.018	36.058	29.780	26.192	24.039
87.5	13.724	11.392	10.405	10.584	10.495
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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CANDELA TABULATION - (Cont.)

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	0.090	0.000	0.090
152.5	0.000	0.000	0.090	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000
157.5	0.179	0.090	0.000	0.359	0.090
160.0	0.090	0.000	0.269	0.179	0.090
162.5	0.359	0.090	0.090	0.090	0.269
165.0	0.090	0.090	0.269	0.179	0.359
167.5	0.359	0.090	0.179	0.179	0.090
170.0	0.090	0.090	0.269	0.179	0.179
172.5	0.000	0.090	0.359	0.448	0.000
175.0	0.269	0.000	0.179	0.269	0.359
177.5	0.269	0.179	0.269	0.269	0.090
180.0	0.269	0.269	0.269	0.269	0.269

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	676.84	N.A.	15.60
0-30	1401.55	N.A.	32.40
0-40	2228.79	N.A.	51.50
0-60	3683.1	N.A.	85.10
0-80	4287.46	N.A.	99.10
0-90	4327.09	N.A.	100.00
10-90	4149.39	N.A.	95.90
20-40	1551.95	N.A.	35.90
20-50	2349.62	N.A.	54.30
40-70	1872.17	N.A.	43.30
60-80	604.36	N.A.	14.00
70-80	186.51	N.A.	4.30
80-90	39.63	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	0.09	N.A.	0.00
110-180	0.09	N.A.	0.00
0-180	4327.19	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	177.71
10-20	499.13
20-30	724.71
30-40	827.24
40-50	797.67
50-60	656.64
60-70	417.85
70-80	186.51
80-90	39.63
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	165	165	165	165	161	161	161	161	154	154	154	147	147	147	141	141	141	139
1	152	146	141	136	149	143	138	134	137	133	130	132	129	126	127	125	122	119
2	140	129	121	113	136	127	119	112	122	115	109	117	112	107	113	109	105	102
3	128	115	104	96	125	112	103	95	108	100	93	105	98	92	101	95	90	87
4	118	102	91	82	115	100	90	82	97	88	81	94	86	79	91	84	78	76
5	109	92	80	72	106	90	79	71	88	78	70	85	76	70	82	75	69	66
6	101	83	71	63	98	82	71	63	79	70	62	77	68	62	75	67	61	58
7	94	76	64	56	91	75	64	56	73	63	55	71	62	55	69	61	55	52
8	87	69	58	50	85	68	58	50	67	57	50	65	56	50	63	55	49	47
9	82	64	53	46	80	63	53	45	62	52	45	60	51	45	59	51	45	42
10	77	59	49	41	75	58	48	41	57	48	41	56	47	41	55	47	41	38

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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

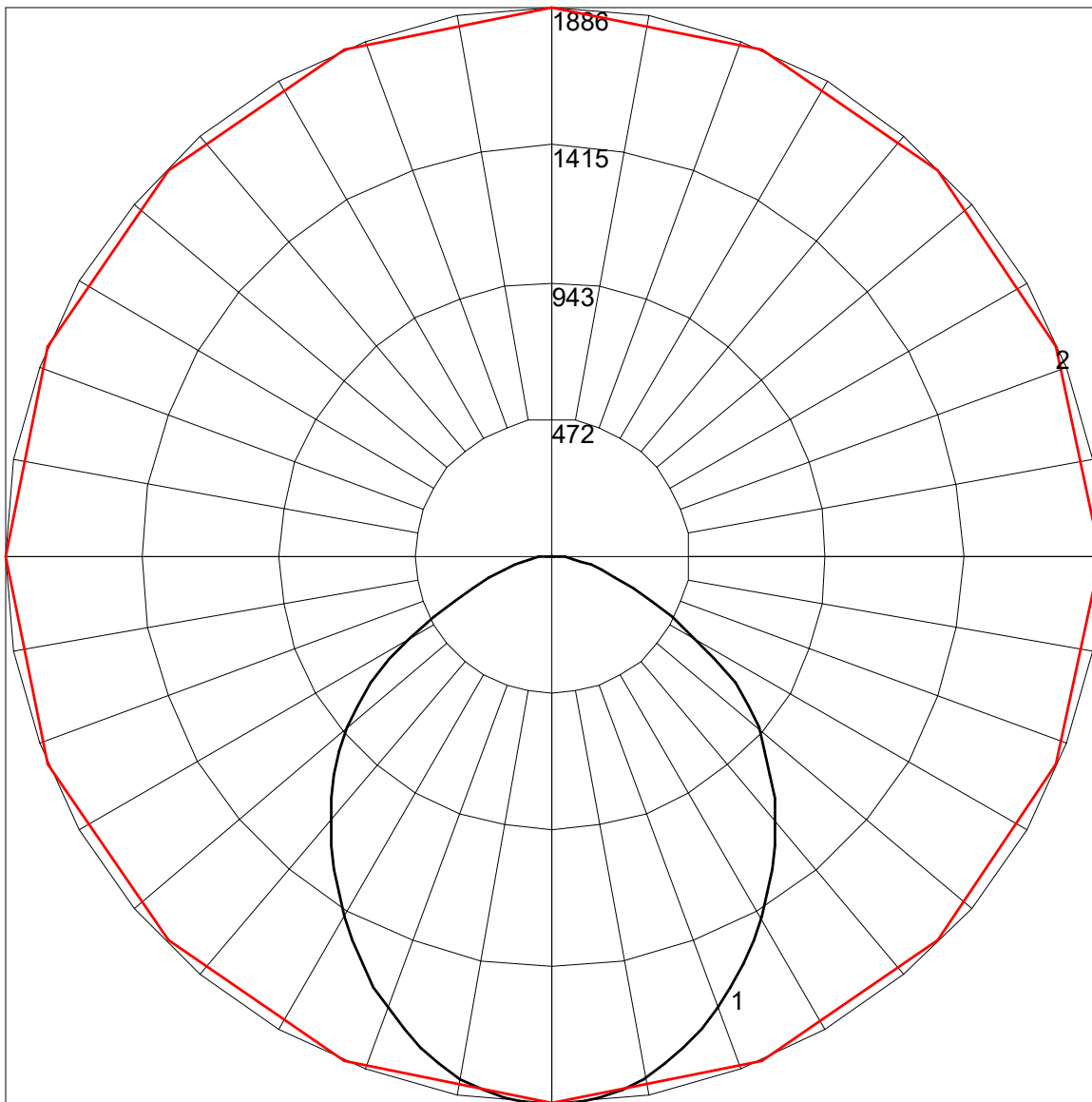
X=2H	Y=2H	15.0	16.6	15.4	16.9	17.2	15.6	17.1	15.9	17.4	17.7
	3H	16.4	17.8	16.7	18.1	18.4	16.4	17.8	16.8	18.1	18.5
	4H	16.8	18.1	17.2	18.5	18.8	16.6	17.9	17.0	18.3	18.7
	6H	17.1	18.3	17.5	18.7	19.1	16.8	18.0	17.2	18.3	18.7
	8H	17.2	18.3	17.6	18.7	19.1	16.8	17.9	17.2	18.3	18.7
	12H	17.2	18.3	17.6	18.7	19.1	16.8	17.9	17.2	18.3	18.7

UGR Viewed Endwise

4H	2H	15.6	16.9	16.0	17.3	17.6	16.1	17.4	16.5	17.7	18.1
	3H	17.2	18.2	17.6	18.6	19.0	17.1	18.2	17.5	18.6	19.0
	4H	17.7	18.7	18.2	19.1	19.6	17.4	18.4	17.8	18.8	19.2
	6H	18.1	19.0	18.6	19.4	19.9	17.6	18.4	18.0	18.9	19.3
	8H	18.2	19.0	18.7	19.5	19.9	17.6	18.4	18.1	18.9	19.3
	12H	18.3	19.0	18.8	19.5	19.9	17.6	18.4	18.1	18.8	19.3
8H	4H	17.9	18.7	18.3	19.1	19.6	17.6	18.4	18.0	18.8	19.3
	6H	18.3	19.0	18.8	19.5	20.0	17.8	18.5	18.3	19.0	19.4
	8H	18.5	19.1	19.0	19.6	20.1	17.9	18.5	18.4	19.0	19.5
	12H	18.6	19.1	19.1	19.6	20.2	17.9	18.5	18.5	19.0	19.5
12H	4H	17.9	18.6	18.4	19.1	19.5	17.6	18.3	18.1	18.8	19.2
	6H	18.3	18.9	18.9	19.4	19.9	17.8	18.4	18.4	18.9	19.4
	8H	18.5	19.1	19.0	19.5	20.1	17.9	18.5	18.5	19.0	19.5

Maximum UGR = 20.2

POLAR GRAPH



Maximum Candela = 1886.066 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.)