



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MD4AG-4-L55-840-A-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20051.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIE, INC

[ISSUEDATE] 24-JUN-2020

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 2-56 LED (AMBIENT) 4' MEDICAL ASYM TROFFER

[MORE] WHITE REFL w/FROSTED ACRYLIC RIBBED LENS IN DOOR & CLEAR

[MORE] ACRYLIC LENS

[LUMCAT] MD4AG-L55-840-A-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5594
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	92
Total Luminaire Watts	61
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.02
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.20
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.44 ft
Luminous Width (90-270)	3.77 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10216	13389	14829
55	8073	10652	11318
65	4556	7379	8057
75	1721	3012	4795
85	0	365	1095

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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	2903.308	2903.308	2903.308	2903.308	2903.308	2903.308	2903.308	2903.308	2903.308
5	2854.431	2883.757	2905.752	2944.854	2947.298	2903.308	2886.201	2873.982	2861.762
10	2764.008	2820.217	2856.875	2915.527	2920.415	2869.094	2820.217	2790.890	2771.339
15	2622.264	2698.024	2768.896	2849.543	2856.875	2795.778	2715.131	2668.697	2651.590
20	2394.985	2487.851	2622.264	2720.018	2737.125	2661.366	2573.387	2487.851	2456.081
25	2140.823	2219.027	2446.306	2563.611	2580.718	2495.183	2372.990	2238.578	2187.256
30	1869.554	1940.426	2226.358	2372.990	2414.536	2294.786	2101.721	1950.202	1893.993
35	1586.066	1681.377	1991.747	2148.155	2182.369	2043.069	1808.458	1612.949	1566.516
40	1346.568	1434.547	1730.254	1908.656	1908.656	1762.024	1500.531	1297.691	1256.145
45	1109.513	1204.824	1454.098	1661.826	1610.505	1476.093	1192.605	1031.310	977.545
50	906.673	987.320	1170.610	1400.333	1297.691	1182.829	896.897	782.036	730.715
55	711.164	782.036	938.443	1126.620	997.096	906.673	632.960	542.537	515.655
60	488.772	564.532	720.939	870.015	742.934	647.623	427.676	337.253	315.258
65	295.707	371.467	478.997	591.415	522.986	417.900	263.937	178.402	158.851
70	158.851	212.616	256.606	376.355	342.141	224.835	114.862	68.428	58.653
75	68.428	100.198	119.749	175.958	190.621	78.204	36.658	31.770	29.326
80	26.882	34.214	36.658	39.102	70.872	14.663	9.775	12.219	9.775
85	0.000	2.444	4.888	9.775	14.663	2.444	2.444	2.444	2.444
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	1046.68	N.A.	18.70
0-30	2142.05	N.A.	38.30
0-40	3316.88	N.A.	59.30
0-60	5081.34	N.A.	90.80
0-80	5583.16	N.A.	99.80
0-90	5593.92	N.A.	100.00
10-90	5319.00	N.A.	95.10
20-40	2270.2	N.A.	40.60
20-50	3299.77	N.A.	59.00
40-70	2150.99	N.A.	38.50
60-80	501.82	N.A.	9.00
70-80	115.29	N.A.	2.10
80-90	10.76	N.A.	0.20
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	5593.92	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	274.92
10-20	771.76
20-30	1095.37
30-40	1174.83
40-50	1029.57
50-60	734.89
60-70	386.53
70-80	115.29
80-90	10.76
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	288	288	288	288	281	281	281	281	269	269	269	258	258	258	247	247	247	242
1	269	260	251	244	263	254	247	240	244	238	233	235	230	226	226	223	219	214
2	249	232	219	207	243	228	215	205	220	209	200	212	203	196	205	198	191	187
3	230	208	192	178	224	205	189	177	198	185	174	191	180	171	185	176	168	163
4	213	188	169	155	208	185	167	154	179	164	152	173	161	150	168	157	148	144
5	197	170	151	137	193	167	149	136	162	147	135	158	144	133	154	142	132	127
6	184	155	135	121	179	153	134	121	148	132	120	145	130	119	141	128	118	114
7	171	142	122	109	167	140	122	109	136	120	108	133	118	107	130	117	107	102
8	160	130	111	99	157	129	111	98	126	109	98	123	108	97	120	107	97	92
9	150	120	102	90	147	119	101	89	116	100	89	114	99	89	111	98	88	84
10	141	112	94	82	138	110	93	82	108	92	82	106	92	81	104	91	81	77

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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

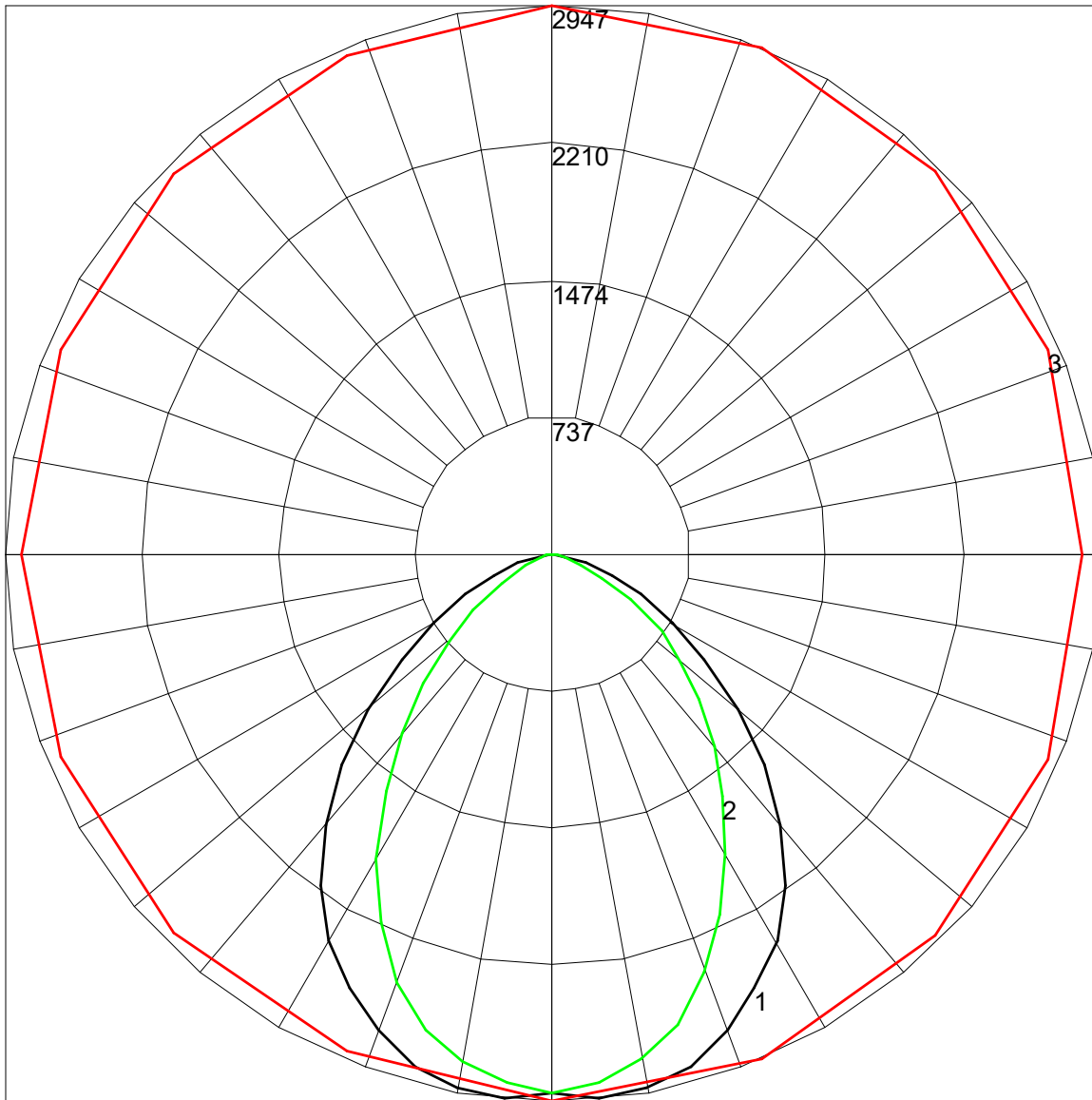
X=2H	Y=2H	15.4	16.8	15.7	17.1	17.4	17.4	18.9	17.8	19.2	19.5
	3H	16.0	17.2	16.4	17.6	17.9	18.4	19.6	18.8	20.0	20.3
	4H	16.0	17.2	16.4	17.6	18.0	18.6	19.8	19.0	20.1	20.5
	6H	16.0	17.1	16.4	17.5	17.9	18.6	19.7	19.0	20.1	20.5
	8H	16.0	17.0	16.4	17.4	17.8	18.6	19.6	19.0	20.0	20.4
	12H	15.9	16.9	16.4	17.3	17.7	18.6	19.6	19.0	20.0	20.4

UGR Viewed Endwise

4H	2H	16.0	17.2	16.4	17.5	17.9	17.6	18.8	18.0	19.1	19.5
	3H	16.7	17.7	17.1	18.1	18.5	18.6	19.6	19.0	20.0	20.4
	4H	16.8	17.7	17.2	18.1	18.5	18.8	19.7	19.3	20.1	20.6
	6H	16.8	17.6	17.3	18.0	18.5	18.9	19.7	19.4	20.1	20.6
	8H	16.8	17.5	17.2	17.9	18.4	18.9	19.6	19.4	20.0	20.5
	12H	16.7	17.4	17.2	17.8	18.3	18.9	19.5	19.4	20.0	20.4
8H	4H	16.9	17.6	17.3	18.0	18.5	18.8	19.5	19.2	19.9	20.4
	6H	16.9	17.5	17.4	18.0	18.4	18.8	19.4	19.3	19.9	20.4
	8H	16.9	17.4	17.4	17.9	18.4	18.8	19.3	19.3	19.8	20.3
	12H	16.8	17.3	17.3	17.8	18.3	18.8	19.2	19.3	19.7	20.3
12H	4H	16.9	17.5	17.3	18.0	18.4	18.7	19.4	19.2	19.8	20.3
	6H	16.9	17.4	17.4	17.8	18.4	18.8	19.3	19.3	19.8	20.3
	8H	16.8	17.3	17.4	17.8	18.4	18.8	19.2	19.3	19.7	20.3

Maximum UGR = 20.6

POLAR GRAPH



Maximum Candela = 2947.298 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Vertical Plane Through Horizontal Angles (0 - 180)
3 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)