



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MD4AEG-4-L22-L66-840-A-DIM-UNV EXAM ONLY_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM BALLABS TEST NO. 20050.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 24-JUN-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2-84 LED(EXAM) & 2-56 LED(AMBIENT) 4' MEDICAL ASYM TROFFER
 [MORE] WHITE REFL w/FROSTED ACRYLIC RIBBED LENS IN DOOR & CLEAR
 [MORE] ACRYLIC LENS
 [LUMCAT] MD4AEG-L22-L66-840-A-DIM-UNV EXAM ONLY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6606
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	57.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.76
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.38
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	26147	23073	14849
55	25048	22055	12556
65	16705	18762	9647
75	5646	9150	5415
85	0	258	258

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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	2538.114	2538.114	2538.114	2538.114	2538.114	2538.114	2538.114	2538.114	2538.114
5	2721.134	2719.983	2680.847	2648.617	2573.797	2434.517	2336.676	2276.820	2414.949
10	2884.586	2878.831	2809.767	2708.472	2549.625	2314.806	2134.088	2042.002	2155.958
15	3014.658	2981.277	2897.248	2733.796	2501.280	2192.792	1939.556	1801.428	1922.290
20	3114.801	3069.909	2953.651	2731.494	2424.158	2032.793	1704.738	1558.552	1659.846
25	3161.995	3121.707	2959.406	2686.602	2312.504	1871.643	1514.811	1360.567	1418.121
30	3163.146	3122.858	2930.629	2616.387	2170.922	1710.493	1349.056	1183.302	1209.777
35	3113.650	3074.513	2851.205	2488.618	2001.714	1535.530	1157.978	1000.282	1016.397
40	3011.204	2967.464	2708.472	2325.165	1816.392	1360.567	983.016	843.736	847.189
45	2839.695	2800.558	2505.884	2132.936	1612.652	1174.093	833.376	714.816	698.701
50	2581.855	2571.495	2246.893	1890.060	1366.322	974.958	674.528	590.500	576.687
55	2206.605	2272.216	1943.010	1583.875	1106.180	776.974	523.738	475.393	475.393
60	1682.867	1856.679	1613.803	1250.064	859.851	572.083	399.422	361.437	367.192
65	1084.310	1288.050	1217.834	958.843	626.183	372.947	277.408	238.272	235.970
70	590.500	733.233	774.671	660.715	408.631	233.668	159.999	126.618	131.222
75	224.459	306.185	363.739	336.113	215.250	131.222	69.064	55.251	67.913
80	48.345	67.913	90.935	94.388	72.518	41.439	25.324	21.870	26.475
85	0.000	3.453	3.453	2.302	3.453	3.453	2.302	1.151	3.453
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : MD4AEG-4-L22-L66-840-A-DIM-UNV EXAM ONLY_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	928.39	N.A.	14.10
0-30	1973.00	N.A.	29.90
0-40	3237.41	N.A.	49.00
0-60	5653.63	N.A.	85.60
0-80	6589.62	N.A.	99.70
0-90	6606.42	N.A.	100.00
10-90	6366.08	N.A.	96.40
20-40	2309.01	N.A.	35.00
20-50	3610.62	N.A.	54.70
40-70	3116.79	N.A.	47.20
60-80	935.99	N.A.	14.20
70-80	235.42	N.A.	3.60
80-90	16.80	N.A.	0.30
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	6606.42	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	240.33
10-20	688.06
20-30	1044.6
30-40	1264.41
40-50	1301.61
50-60	1114.62
60-70	700.57
70-80	235.42
80-90	16.80
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	148	148	148	148	145	145	145	145	138	138	138	133	133	133	127	127	127	125
1	137	132	127	123	134	129	125	121	124	120	117	119	116	114	115	112	110	108
2	126	116	108	102	122	114	107	101	110	104	98	105	101	96	102	98	94	91
3	115	103	93	86	112	101	92	85	97	90	83	94	87	82	91	85	81	78
4	105	91	81	73	103	90	80	72	87	78	71	84	76	71	81	75	70	67
5	97	82	71	63	95	80	70	63	78	69	62	75	68	61	73	66	61	58
6	90	74	63	55	87	73	62	55	70	61	54	68	60	54	66	59	54	51
7	83	67	56	49	81	66	56	49	64	55	48	62	54	48	61	53	48	45
8	77	61	51	44	76	60	50	43	59	50	43	57	49	43	56	48	43	40
9	72	56	46	39	71	55	46	39	54	45	39	53	44	39	51	44	39	36
10	68	52	42	36	66	51	42	35	50	41	35	49	41	35	48	40	35	33

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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

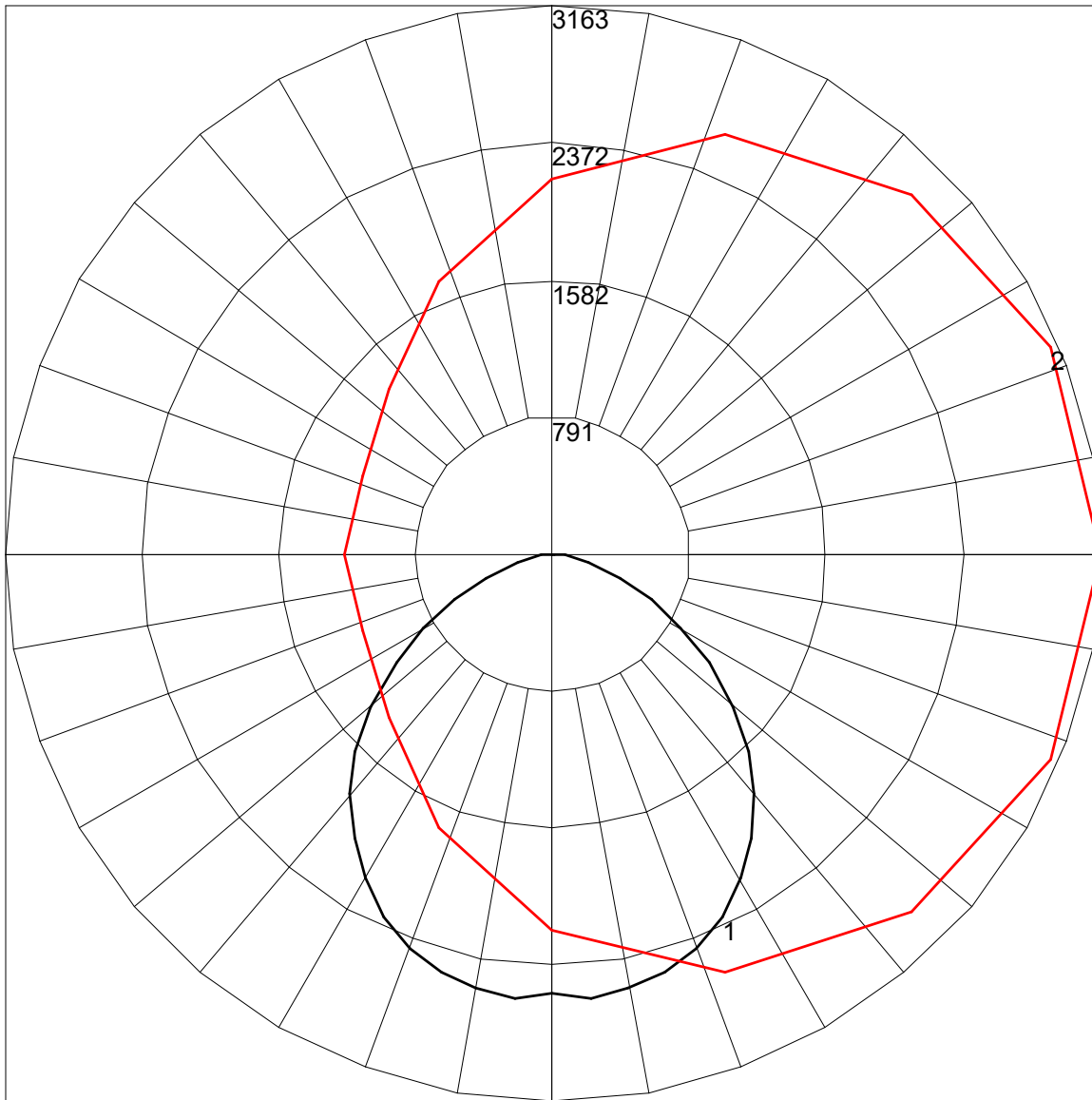
X=2H	Y=2H	24.8	26.4	25.2	26.7	27.0	20.4	21.9	20.7	22.3	22.6
	3H	25.6	27.0	26.0	27.4	27.7	21.5	22.9	21.9	23.2	23.6
	4H	25.7	27.0	26.1	27.4	27.8	21.7	23.0	22.1	23.4	23.8
	6H	25.7	26.9	26.1	27.3	27.7	21.8	23.0	22.2	23.4	23.8
	8H	25.7	26.8	26.1	27.2	27.6	21.8	22.9	22.2	23.3	23.7
	12H	25.6	26.7	26.0	27.1	27.5	21.7	22.8	22.2	23.2	23.7

UGR Viewed Endwise

4H	2H	25.2	26.5	25.6	26.9	27.2	21.2	22.5	21.6	22.8	23.2
	3H	26.2	27.3	26.6	27.7	28.1	22.4	23.5	22.9	23.9	24.3
	4H	26.3	27.3	26.7	27.7	28.1	22.7	23.7	23.2	24.1	24.6
	6H	26.3	27.1	26.7	27.6	28.0	22.8	23.7	23.3	24.1	24.6
	8H	26.3	27.0	26.7	27.5	28.0	22.8	23.6	23.3	24.0	24.5
	12H	26.2	26.9	26.7	27.4	27.9	22.8	23.5	23.3	24.0	24.4
8H	4H	26.3	27.1	26.8	27.6	28.0	22.9	23.6	23.3	24.1	24.6
	6H	26.3	27.0	26.8	27.5	27.9	23.0	23.6	23.5	24.1	24.6
	8H	26.3	26.9	26.8	27.4	27.9	22.9	23.5	23.5	24.0	24.5
	12H	26.3	26.8	26.8	27.3	27.8	22.9	23.4	23.4	23.9	24.5
12H	4H	26.3	27.0	26.8	27.5	28.0	22.8	23.5	23.3	24.0	24.5
	6H	26.3	26.9	26.8	27.3	27.9	22.9	23.5	23.5	24.0	24.5
	8H	26.3	26.8	26.8	27.3	27.8	22.9	23.4	23.4	23.9	24.5

Maximum UGR = 28.1

POLAR GRAPH



Maximum Candela = 3163.146 Located At Horizontal Angle = 0, Vertical Angle = 30
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (30) (Through Max. Cd.)