



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MD4AEG-4-L20-L50-8TW-A-DALI-UNV EXAM ONLY 4000K_.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] 28-JUL-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] LED(EXAM) & (AMBIENT) 4' MEDICAL ASYM TROFFER
 [MORE] WHITE REFL w/FROSTED ACRYLIC RIBBED LENS IN DOOR & CLEAR
 [MORE] ACRYLIC LENS
 [LUMCAT] MD4AEG-L20-L50-8TW-A-DALI-UNV EXAM ONLY 4000k

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5041
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	92
Total Luminaire Watts	54.6
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	19953	17607	11331
55	19114	16830	9582
65	12747	14317	7361
75	4309	6982	4132
85	0	197	197

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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	1936.819	1936.819	1936.819	1936.819	1936.819	1936.819	1936.819	1936.819	1936.819
5	2076.481	2075.603	2045.738	2021.143	1964.049	1857.765	1783.103	1737.428	1842.833
10	2201.210	2196.818	2144.116	2066.819	1945.603	1766.414	1628.509	1558.239	1645.198
15	2300.467	2274.994	2210.872	2086.143	1908.711	1673.306	1480.064	1374.658	1466.888
20	2376.885	2342.629	2253.913	2084.386	1849.860	1551.212	1300.875	1189.321	1266.618
25	2412.899	2382.156	2258.305	2050.130	1764.657	1428.239	1155.943	1038.240	1082.159
30	2413.777	2383.034	2236.345	1996.549	1656.617	1305.267	1029.457	902.971	923.173
35	2376.007	2346.142	2175.737	1899.049	1527.496	1171.754	883.646	763.309	775.606
40	2297.832	2264.453	2066.819	1774.320	1386.077	1038.240	750.133	643.850	646.485
45	2166.954	2137.089	1912.225	1627.631	1230.605	895.944	635.944	545.472	533.174
50	1970.197	1962.292	1714.590	1442.293	1042.632	743.984	514.728	450.607	440.066
55	1683.847	1733.914	1482.699	1208.645	844.119	592.904	399.661	362.769	362.769
60	1284.186	1416.820	1231.483	953.916	656.147	436.553	304.796	275.810	280.202
65	827.430	982.903	929.322	731.687	477.837	284.594	211.689	181.824	180.067
70	450.607	559.526	591.147	504.188	311.823	178.310	122.094	96.621	100.135
75	171.283	233.648	277.567	256.486	164.256	100.135	52.703	42.162	51.824
80	36.892	51.824	69.392	72.027	55.338	31.622	19.324	16.689	20.203
85	0.000	2.635	2.635	1.757	2.635	2.635	1.757	0.878	2.635
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-L20-L50-8TW-A-DALI-UNV EXAM ONLY 4000K_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	708.45	N.A.	14.10
0-30	1505.58	N.A.	29.90
0-40	2470.45	N.A.	49.00
0-60	4314.25	N.A.	85.60
0-80	5028.5	N.A.	99.70
0-90	5041.32	N.A.	100.00
10-90	4857.92	N.A.	96.40
20-40	1761.99	N.A.	35.00
20-50	2755.24	N.A.	54.70
40-70	2378.41	N.A.	47.20
60-80	714.25	N.A.	14.20
70-80	179.65	N.A.	3.60
80-90	12.82	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	5041.32	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	183.40
10-20	525.05
20-30	797.13
30-40	964.86
40-50	993.25
50-60	850.56
60-70	534.60
70-80	179.65
80-90	12.82
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	113	113	113	113	111	111	111	111	106	106	106	101	101	101	97	97	97	95
1	105	101	97	94	102	99	95	92	95	92	89	91	89	87	87	86	84	82
2	96	89	83	78	93	87	81	77	84	79	75	81	77	73	78	75	72	70
3	88	78	71	65	85	77	70	65	74	68	64	72	67	63	69	65	61	59
4	80	70	62	56	78	68	61	55	66	60	55	64	58	54	62	57	53	51
5	74	62	54	48	72	61	54	48	59	53	47	57	52	47	56	51	46	44
6	68	56	48	42	67	55	48	42	54	47	42	52	46	41	51	45	41	39
7	63	51	43	37	62	50	43	37	49	42	37	47	41	37	46	41	36	34
8	59	47	39	33	58	46	38	33	45	38	33	43	37	33	42	37	33	31
9	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	29	28
10	52	39	32	27	51	39	32	27	38	31	27	37	31	27	36	31	27	25

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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

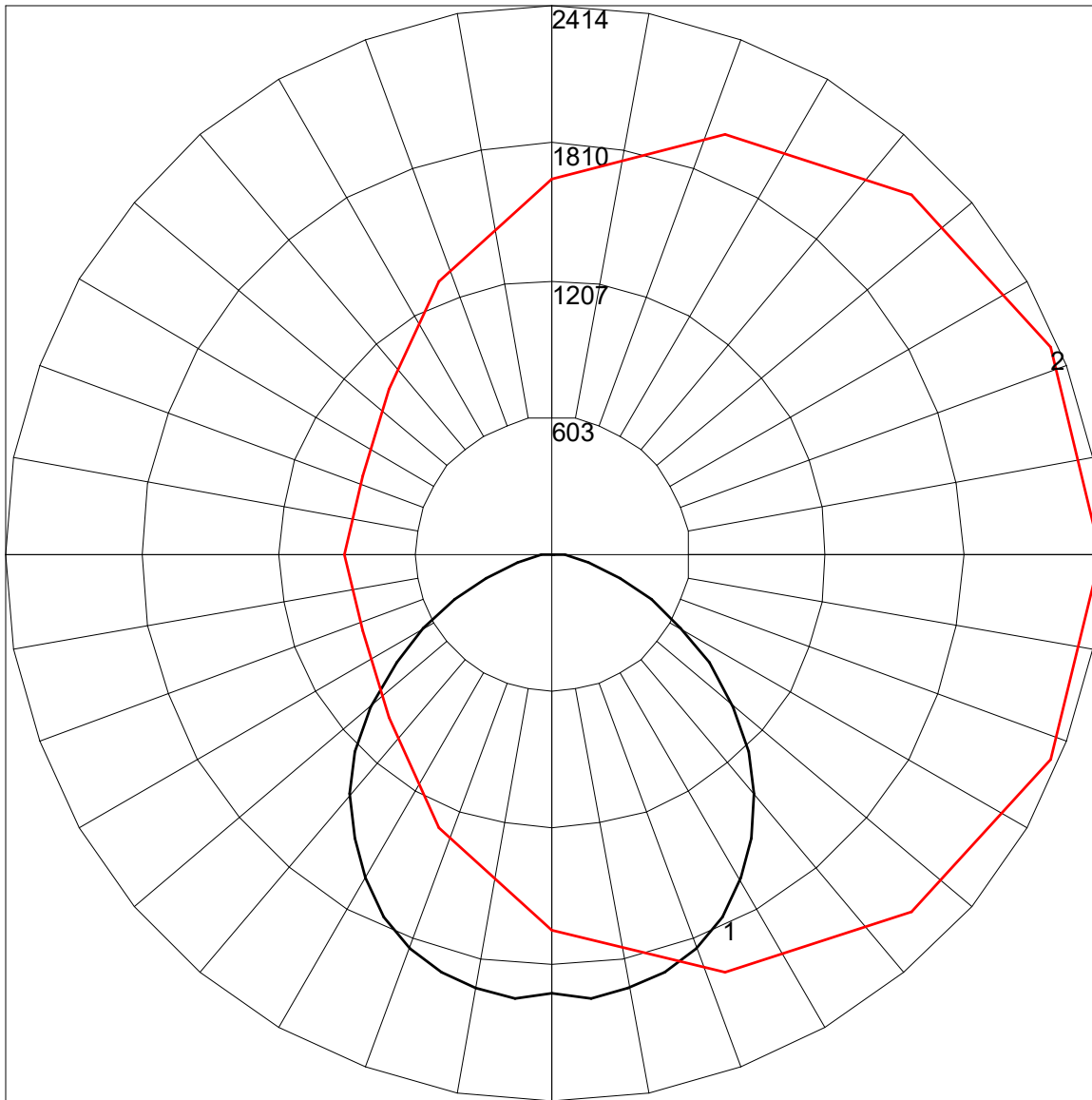
4H	2H	25.2	26.5	25.6	26.9	27.2	21.2	22.5	21.6	22.8	23.2
	3H	26.2	27.3	26.6	27.7	28.1	22.4	23.5	22.9	23.9	24.3
	4H	26.3	27.3	26.7	27.7	28.1	22.7	23.7	23.2	24.1	24.6
	6H	26.3	27.1	26.7	27.6	28.0	22.8	23.7	23.3	24.1	24.6
	8H	26.3	27.0	26.7	27.5	28.0	22.8	23.6	23.3	24.0	24.5
	12H	26.2	26.9	26.7	27.4	27.9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

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POLAR GRAPH



Maximum Candela = 2413.777 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.)