H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : MD4AEG-4-L20-L50-8TW-A-DALI-UNV AMBIENT ONLY 4000K_.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] 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 AMBIENT ONLY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2027
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	81
Total Luminaire Watts	25
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	3702	4851	5373
55	2925	3860	4101
65	1651	2674	2919
75	624	1092	1738
85	0	132	397

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0	1052.021	1052.021	1052.021	1052.021	1052.021	1052.021	1052.021	1052.021	1052.021
5	1034.310	1044.937	1052.906	1067.075	1067.961	1052.021	1045.822	1041.394	1036.967
10	1001.545	1021.913	1035.196	1056.449	1058.220	1039.623	1021.913	1011.286	1004.202
15	950.184	977.636	1003.316	1032.539	1035.196	1013.057	983.834	967.009	960.810
20	867.829	901.479	950.184	985.605	991.804	964.352	932.473	901.479	889.967
25	775.733	804.070	886.425	928.931	935.130	904.136	859.859	811.154	792.558
30	677.438	703.118	806.726	859.859	874.913	831.522	761.564	706.660	686.293
35	574.715	609.251	721.715	778.389	790.787	740.311	655.299	584.456	567.631
40	487.932	519.812	626.962	691.606	691.606	638.474	543.721	470.221	455.167
45	402.035	436.571	526.896	602.167	583.571	534.866	432.143	373.698	354.216
50	328.535	357.758	424.173	507.414	470.221	428.601	324.993	283.373	264.776
55	257.692	283.373	340.047	408.234	361.300	328.535	229.355	196.590	186.849
60	177.108	204.560	261.234	315.252	269.204	234.668	154.969	122.204	114.235
65	107.150	134.602	173.566	214.301	189.505	151.427	95.638	64.644	57.560
70	57.560	77.042	92.982	136.373	123.976	81.470	41.620	24.795	21.253
75	24.795	36.307	43.391	63.759	69.072	28.337	13.283	11.512	10.626
80	9.741	12.398	13.283	14.169	25.681	5.313	3.542	4.428	3.542
85	0.000	0.886	1.771	3.542	5.313	0.886	0.886	0.886	0.886
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	379.27	N.A.	18.70
0-30	776.18	N.A.	38.30
0-40	1201.88	N.A.	59.30
0-60	1841.23	N.A.	90.80
0-80	2023.07	N.A.	99.80
0-90	2026.97	N.A.	100.00
10-90	1927.35	N.A.	95.10
20-40	822.61	N.A.	40.60
20-50	1195.68	N.A.	59.00
40-70	779.42	N.A.	38.50
60-80	181.84	N.A.	9.00
70-80	41.78	N.A.	2.10
80-90	3.90	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	2026.97	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	99.62
10-20	279.65
20-30	396.91
30-40	425.70
40-50	373.07
50-60	266.29
60-70	140.06
70-80	41.78
80-90	3.90
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	104	104	104	104	102	102	102	102	97	97	97	93	93	93	89	89	89	88
1	97	94	91	88	95	92	89	87	88	86	84	85	83	82	82	81	79	78
2	90	84	79	75	88	83	78	74	80	76	73	77	74	71	74	72	69	68
3	83	75	69	65	81	74	69	64	72	67	63	69	65	62	67	64	61	59
4	77	68	61	56	75	67	61	56	65	59	55	63	58	54	61	57	54	52
5	72	62	55	50	70	61	54	49	59	53	49	57	52	48	56	51	48	46
6	67	56	49	44	65	55	49	44	54	48	43	52	47	43	51	46	43	41
7	62	51	44	39	61	51	44	39	49	43	39	48	43	39	47	42	39	37
8	58	47	40	36	57	47	40	36	45	40	35	44	39	35	43	39	35	33
9	54	44	37	32	53	43	37	32	42	36	32	41	36	32	40	36	32	30
10	51	40	34	30	50	40	34	30	39	33	30	38	33	29	38	33	29	28

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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					UGR Viewed Endwise				
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
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

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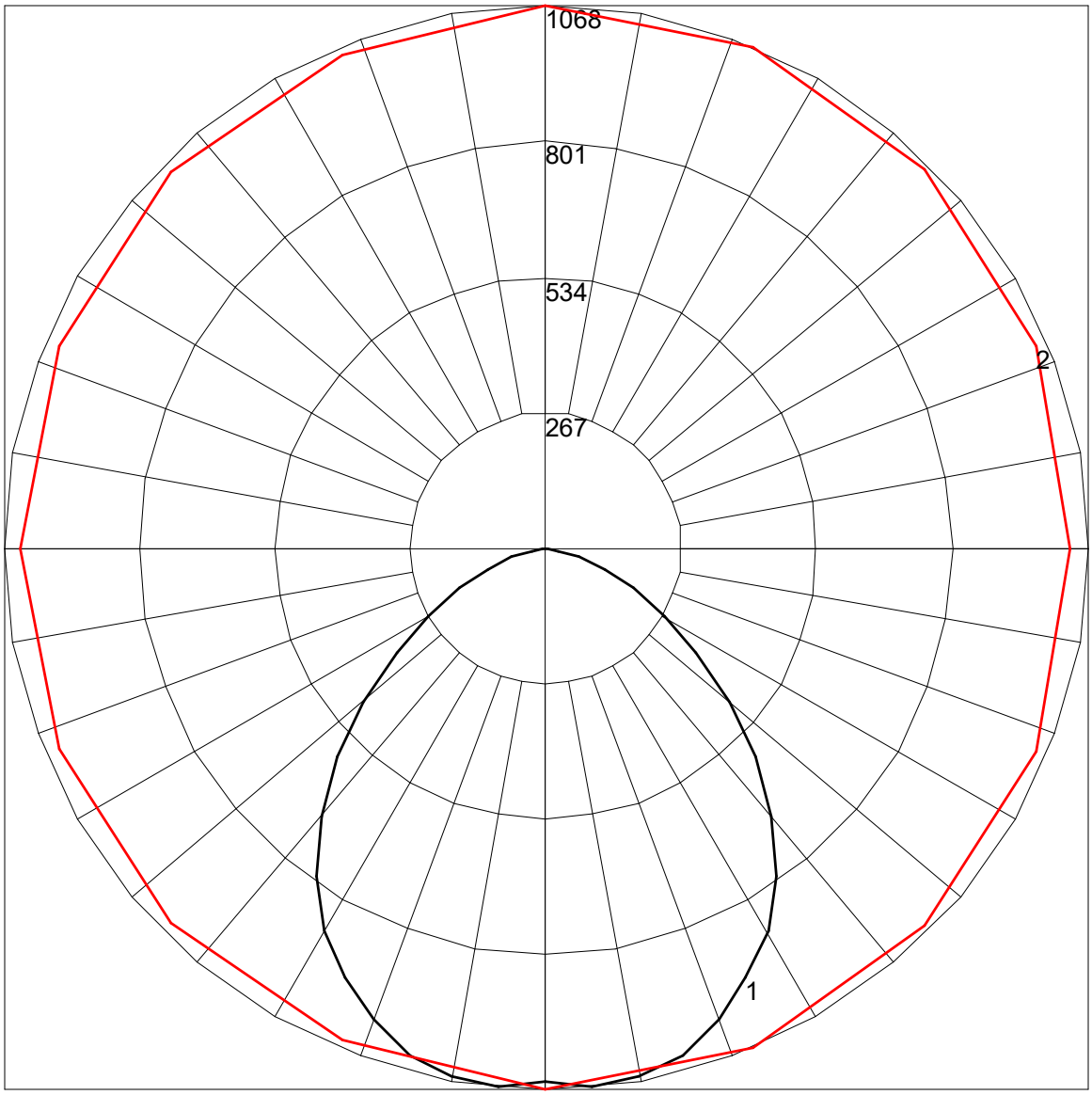
POLAR GRAPH



Maximum Candela = 1067.961 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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