H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : MD4AEG-4-L22-L52-840-A_AMBIENT ONLY.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] 23-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-L52-840-A_AMBIENT ONLY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2311
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	100
Total Luminaire Watts	23.1
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	4220	5531	6126
55	3335	4401	4676
65	1882	3049	3329
75	711	1244	1981
85	0	151	453

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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	1199.418	1199.418	1199.418	1199.418	1199.418	1199.418	1199.418	1199.418	1199.418
5	1179.226	1191.341	1200.427	1216.581	1217.591	1199.418	1192.351	1187.303	1182.254
10	1141.870	1165.091	1180.235	1204.466	1206.485	1185.283	1165.091	1152.976	1144.899
15	1083.313	1114.611	1143.889	1177.206	1180.235	1154.995	1121.678	1102.495	1095.428
20	989.419	1027.784	1083.313	1123.697	1130.764	1099.466	1063.120	1027.784	1014.659
25	884.419	916.727	1010.621	1059.082	1066.149	1030.813	980.332	924.804	903.602
30	772.352	801.631	919.756	980.332	997.496	948.025	868.265	805.670	782.449
35	655.238	694.612	822.833	887.448	901.583	844.035	747.112	666.343	647.161
40	556.296	592.642	714.805	788.506	788.506	727.930	619.901	536.103	518.940
45	458.363	497.738	600.719	686.535	665.334	609.805	492.690	426.056	403.844
50	374.566	407.883	483.604	578.507	536.103	488.652	370.527	323.076	301.874
55	293.797	323.076	387.691	465.431	411.921	374.566	261.489	224.134	213.028
60	201.922	233.220	297.835	359.422	306.922	267.547	176.682	139.326	130.240
65	122.163	153.461	197.884	244.326	216.057	172.643	109.038	73.702	65.625
70	65.625	87.836	106.009	155.480	141.346	92.884	47.452	28.269	24.231
75	28.269	41.394	49.471	72.692	78.750	32.308	15.144	13.125	12.115
80	11.106	14.135	15.144	16.154	29.279	6.058	4.038	5.048	4.038
85	0.000	1.010	2.019	4.038	6.058	1.010	1.010	1.010	1.010
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	432.41	N.A.	18.70
0-30	884.93	N.A.	38.30
0-40	1370.27	N.A.	59.30
0-60	2099.21	N.A.	90.80
0-80	2306.52	N.A.	99.80
0-90	2310.97	N.A.	100.00
10-90	2197.39	N.A.	95.10
20-40	937.87	N.A.	40.60
20-50	1363.2	N.A.	59.00
40-70	888.62	N.A.	38.50
60-80	207.31	N.A.	9.00
70-80	47.63	N.A.	2.10
80-90	4.45	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	2310.97	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	113.57
10-20	318.83
20-30	452.52
30-40	485.35
40-50	425.34
50-60	303.60
60-70	159.69
70-80	47.63
80-90	4.45
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	125	125	125	125	122	122	122	122	117	117	117	112	112	112	107	107	107	105
1	117	113	109	106	114	110	107	104	106	103	101	102	100	98	98	96	95	93
2	108	101	95	90	105	99	93	89	95	91	87	92	88	85	89	86	83	81
3	100	90	83	77	97	89	82	77	86	80	75	83	78	74	80	76	73	71
4	92	81	73	67	90	80	73	67	77	71	66	75	70	65	73	68	64	62
5	86	74	65	59	83	73	65	59	70	64	58	68	62	58	67	61	57	55
6	80	67	59	53	78	66	58	52	64	57	52	63	56	52	61	56	51	49
7	74	61	53	47	72	61	53	47	59	52	47	58	51	46	56	51	46	44
8	69	56	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40
9	65	52	44	39	64	52	44	39	50	43	39	49	43	38	48	42	38	36
10	61	48	41	36	60	48	40	36	47	40	35	46	40	35	45	39	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					UGR Viewed Endwise				
X=2H	Y=2H	15.2	16.6	15.5	16.9	17.2	17.2	18.7	17.6	19.0	19.3
	3H	15.8	17.0	16.2	17.4	17.7	18.2	19.4	18.6	19.8	20.1
	4H	15.8	17.0	16.2	17.4	17.8	18.4	19.6	18.8	19.9	20.3
	6H	15.8	16.9	16.2	17.3	17.7	18.4	19.5	18.8	19.9	20.3
	8H	15.8	16.8	16.2	17.2	17.6	18.4	19.4	18.8	19.8	20.2
	12H	15.7	16.7	16.2	17.1	17.5	18.4	19.4	18.8	19.8	20.2
4H	2H	15.8	17.0	16.2	17.3	17.7	17.4	18.6	17.8	18.9	19.3
	3H	16.5	17.5	16.9	17.9	18.3	18.4	19.4	18.8	19.8	20.2
	4H	16.6	17.5	17.0	17.9	18.3	18.6	19.5	19.1	19.9	20.4
	6H	16.6	17.4	17.1	17.8	18.3	18.7	19.5	19.2	19.9	20.4
	8H	16.6	17.3	17.0	17.7	18.2	18.7	19.4	19.2	19.8	20.3
	12H	16.5	17.2	17.0	17.6	18.1	18.7	19.3	19.2	19.8	20.2
8H	4H	16.7	17.4	17.1	17.8	18.3	18.6	19.3	19.0	19.7	20.2
	6H	16.7	17.3	17.2	17.8	18.2	18.6	19.2	19.1	19.7	20.2
	8H	16.7	17.2	17.2	17.7	18.2	18.6	19.1	19.1	19.6	20.1
	12H	16.6	17.1	17.1	17.6	18.1	18.6	19.0	19.1	19.5	20.1
12H	4H	16.7	17.3	17.1	17.8	18.2	18.5	19.2	19.0	19.6	20.1
	6H	16.7	17.2	17.2	17.6	18.2	18.6	19.1	19.1	19.6	20.1
	8H	16.6	17.1	17.2	17.6	18.2	18.6	19.0	19.1	19.5	20.1

Maximum UGR = 20.4

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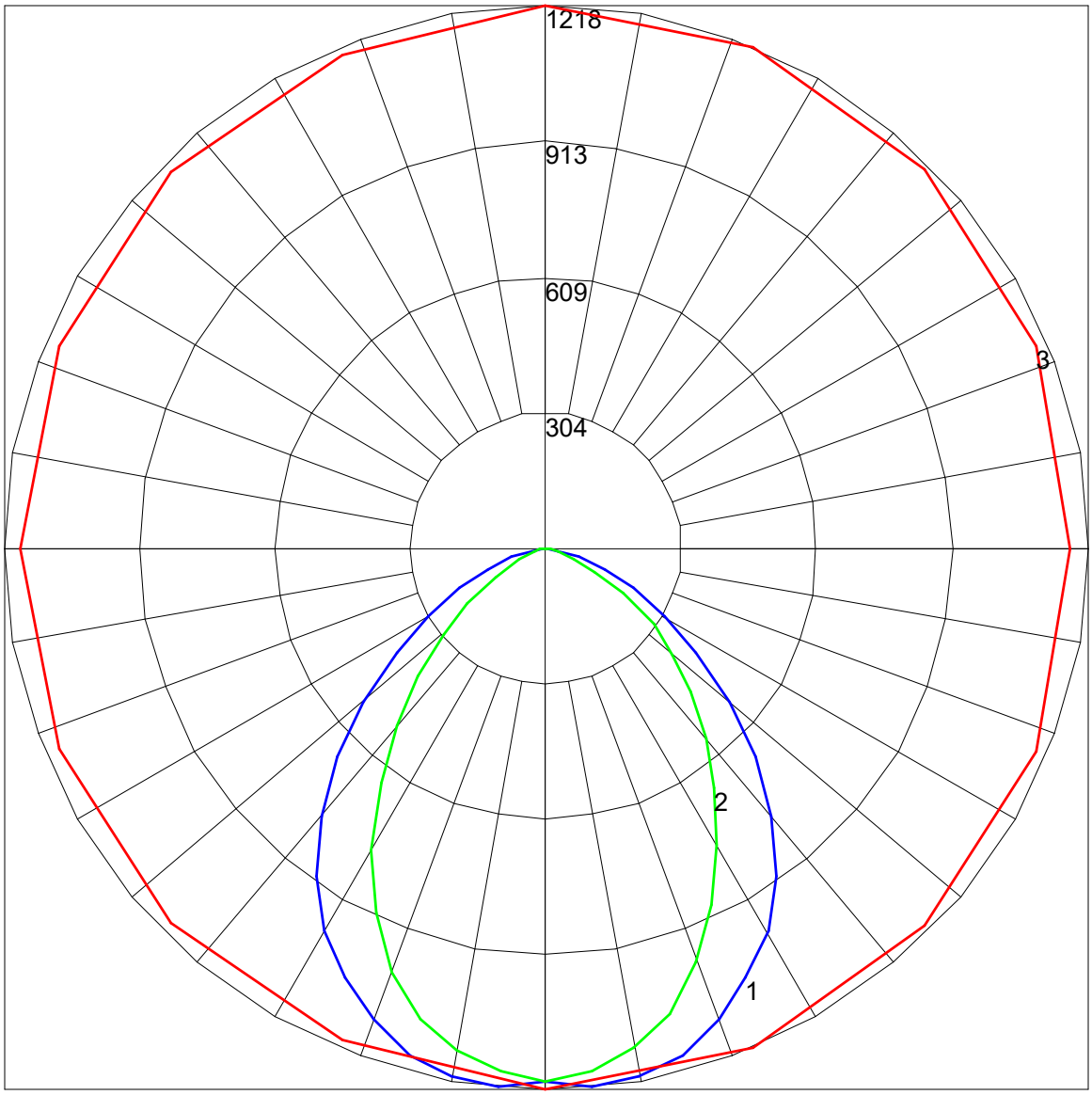
POLAR GRAPH



Maximum Candela = 1217.591 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (0 - 180)
3 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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