H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : MD4AEG-4-P15-P40-8TW-A-POE 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] 27-JUL-2020
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] LED AMBIENT EXAM 4' MEDICAL ASYM TROFFER
[MORE] WHITE REFL w/FROSTED ACRYLIC RIBBED LENS IN DOOR & CLEAR
[MORE] ACRYLIC LENS
[LUMCAT] MD4AEG-P15-P40-840-A-PoE AMBIENT ONLY 4000k

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1519
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	91
Total Luminaire Watts	16.7
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	2774	3636	4027
55	2192	2893	3073
65	1237	2004	2188
75	467	818	1302
85	0	99	297

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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	788.367	788.367	788.367	788.367	788.367	788.367	788.367	788.367	788.367
5	775.095	783.058	789.030	799.648	800.312	788.367	783.722	780.404	777.086
10	750.541	765.804	775.758	791.685	793.012	779.076	765.804	757.841	752.532
15	712.052	732.624	751.868	773.768	775.758	759.168	737.269	724.660	720.015
20	650.336	675.553	712.052	738.596	743.242	722.670	698.780	675.553	666.927
25	581.321	602.557	664.272	696.125	700.771	677.544	644.364	607.865	593.930
30	507.660	526.905	604.547	644.364	655.645	623.128	570.703	529.560	514.297
35	430.682	456.563	540.841	583.312	592.602	554.777	491.070	437.982	425.373
40	365.648	389.538	469.835	518.278	518.278	478.462	407.456	352.376	341.095
45	301.278	327.159	394.847	451.254	437.318	400.820	323.841	280.043	265.443
50	246.199	268.098	317.868	380.248	352.376	321.187	243.544	212.355	198.419
55	193.110	212.355	254.826	305.924	270.752	246.199	171.875	147.321	140.021
60	132.722	153.294	195.765	236.245	201.737	175.856	116.131	91.578	85.605
65	80.297	100.868	130.067	160.593	142.012	113.477	71.670	48.443	43.135
70	43.135	57.734	69.679	102.196	92.905	61.052	31.190	18.581	15.927
75	18.581	27.208	32.517	47.780	51.761	21.235	9.954	8.627	7.963
80	7.300	9.291	9.954	10.618	19.245	3.982	2.654	3.318	2.654
85	0.000	0.664	1.327	2.654	3.982	0.664	0.664	0.664	0.664
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	284.22	N.A.	18.70
0-30	581.66	N.A.	38.30
0-40	900.67	N.A.	59.30
0-60	1379.79	N.A.	90.80
0-80	1516.06	N.A.	99.80
0-90	1518.98	N.A.	100.00
10-90	1444.33	N.A.	95.10
20-40	616.45	N.A.	40.60
20-50	896.02	N.A.	59.00
40-70	584.08	N.A.	38.50
60-80	136.27	N.A.	9.00
70-80	31.31	N.A.	2.10
80-90	2.92	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	1518.98	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	74.65
10-20	209.57
20-30	297.44
30-40	319.01
40-50	279.57
50-60	199.55
60-70	104.96
70-80	31.31
80-90	2.92
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	117	117	117	117	115	115	115	115	110	110	110	105	105	105	101	101	101	99
1	110	106	102	99	107	104	101	98	100	97	95	96	94	92	92	91	89	87
2	101	95	89	84	99	93	88	83	89	85	82	86	83	80	83	81	78	76
3	94	85	78	73	91	83	77	72	81	75	71	78	73	70	76	72	68	67
4	87	76	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	59
5	80	69	61	56	78	68	61	55	66	60	55	64	59	54	63	58	54	52
6	75	63	55	50	73	62	55	49	60	54	49	59	53	49	57	52	48	46
7	70	58	50	44	68	57	50	44	55	49	44	54	48	44	53	47	43	42
8	65	53	45	40	64	52	45	40	51	45	40	50	44	40	49	43	39	38
9	61	49	42	37	60	48	41	36	47	41	36	46	40	36	45	40	36	34
10	58	45	38	33	56	45	38	33	44	38	33	43	37	33	42	37	33	31

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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	14.0	15.4	14.3	15.7	16.0	16.0	17.5	16.4	17.8	18.1
	3H	14.6	15.8	15.0	16.2	16.5	17.0	18.2	17.4	18.6	18.9
	4H	14.6	15.8	15.0	16.2	16.6	17.2	18.4	17.6	18.7	19.1
	6H	14.6	15.7	15.0	16.1	16.5	17.2	18.3	17.6	18.7	19.1
	8H	14.6	15.6	15.0	16.0	16.4	17.2	18.2	17.6	18.6	19.0
	12H	14.5	15.5	15.0	15.9	16.4	17.2	18.2	17.6	18.6	19.0
4H	2H	14.6	15.8	15.0	16.1	16.5	16.2	17.4	16.6	17.7	18.1
	3H	15.3	16.3	15.7	16.7	17.1	17.2	18.2	17.6	18.6	19.0
	4H	15.4	16.3	15.8	16.7	17.1	17.4	18.3	17.9	18.7	19.2
	6H	15.4	16.2	15.9	16.6	17.1	17.5	18.3	18.0	18.7	19.2
	8H	15.4	16.1	15.8	16.5	17.0	17.5	18.2	18.0	18.6	19.1
	12H	15.3	16.0	15.8	16.4	16.9	17.5	18.1	18.0	18.6	19.0
8H	4H	15.5	16.2	15.9	16.6	17.1	17.4	18.1	17.8	18.5	19.0
	6H	15.5	16.1	16.0	16.6	17.0	17.4	18.0	17.9	18.5	19.0
	8H	15.5	16.0	16.0	16.5	17.0	17.4	17.9	17.9	18.4	18.9
	12H	15.4	15.9	15.9	16.4	16.9	17.4	17.8	17.9	18.3	18.9
12H	4H	15.5	16.1	15.9	16.6	17.0	17.3	18.0	17.8	18.4	18.9
	6H	15.5	16.0	16.0	16.4	17.0	17.4	17.9	17.9	18.4	18.9
	8H	15.4	15.9	16.0	16.4	17.0	17.4	17.8	17.9	18.3	18.9

Maximum UGR = 19.2

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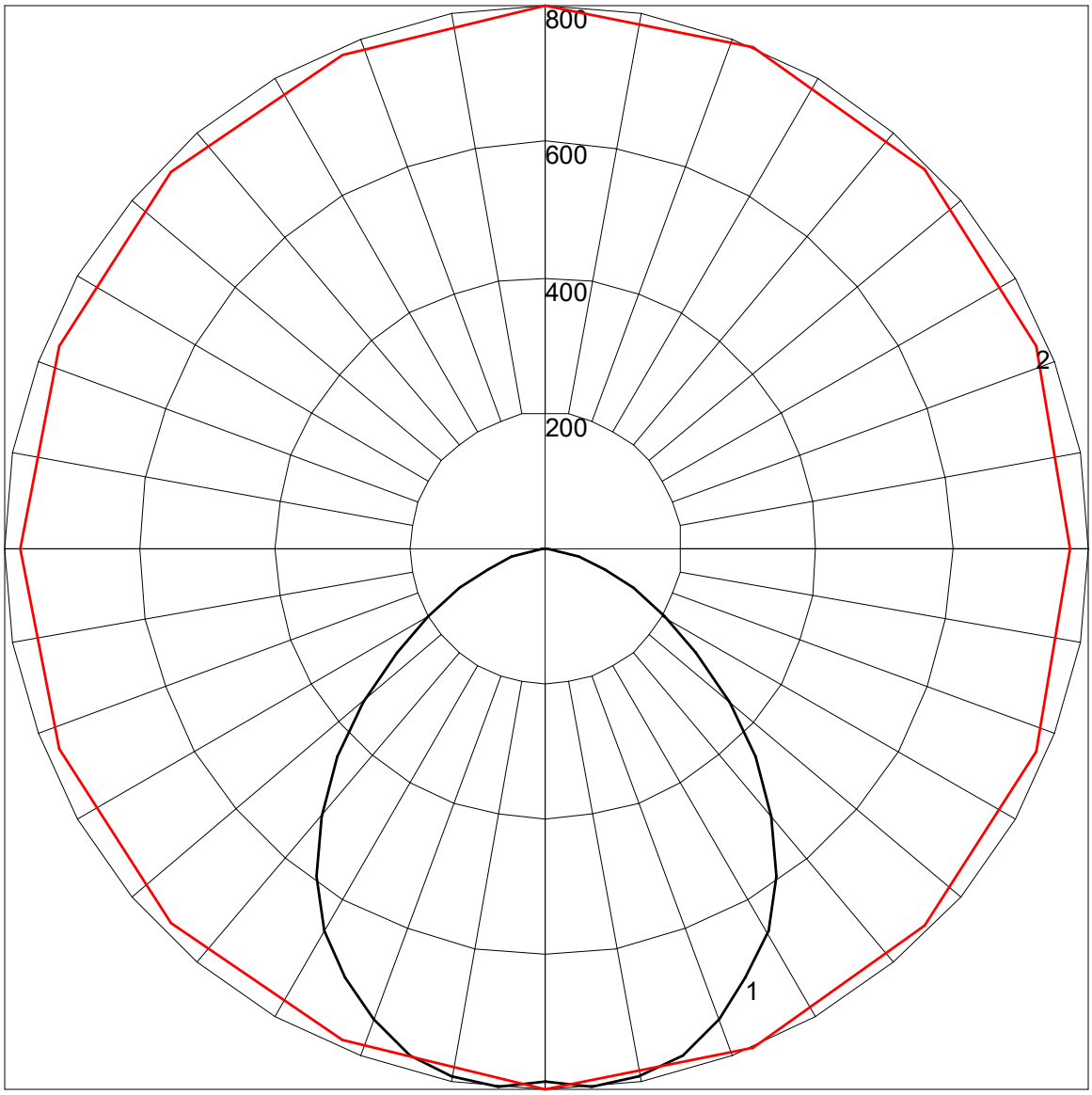
POLAR GRAPH



Maximum Candela = 800.312 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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