



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-14-L29-AMB-L45-835-SAF125-DIM-UNV AMBER ONLY_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TESTLAB] GEN from Photopia 2017.0.4 see: www.ltiopics.com/ies

[ISSUEDATE] 13 MAY 2020

[TESTDATE] Wed Jan 24 15:50:54 2018

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.

[LUMCAT] MCTG-14-L12-AMB-L45-835-SAF125-DIM-UNV AMBER ONLY

[LUMINAIRE] 1x4 LED CLEANROOM LUMINAIRE

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2970
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
Total Luminaire Watts	31.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.04
Spacing Criterion (Diagonal)	1.16
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.98 ft
Luminous Width (90-270)	0.98 ft
Luminous Height	0.38 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2635	1944	1708
55	2143	1435	1208
65	1606	959	793
75	1048	528	443
85	537	198	175

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	1491.739	1491.739	1491.739	1491.739	1491.739
10	1432.909	1431.949	1425.490	1409.420	1411.501
20	1287.496	1276.475	1259.905	1244.065	1224.843
30	1092.138	1079.670	1038.498	1007.145	989.834
40	864.217	847.614	789.910	747.140	730.675
50	622.845	600.211	549.457	505.267	485.656
60	394.222	377.730	339.154	306.702	295.038
70	200.844	191.702	169.320	154.941	148.987
80	66.493	60.029	55.219	52.762	53.483
90	4.410	5.187	5.775	6.004	6.211
100	1.208	1.723	1.998	1.989	1.755
110	0.593	0.845	0.910	1.001	1.029
120	0.253	0.303	0.363	0.459	0.436
130	0.390	0.230	0.239	0.294	0.248
140	0.230	0.216	0.257	0.276	0.299
150	0.358	0.266	0.294	0.248	0.193
160	0.170	0.221	0.207	0.253	0.262
170	0.115	0.184	0.289	0.317	0.276
180	0.349	0.349	0.349	0.349	0.349

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Zone	Lumens	%Lamp	%Fixt
0-20	519.13	N.A.	17.50
0-30	1051.59	N.A.	35.40
0-40	1628.62	N.A.	54.80
0-60	2551.72	N.A.	85.90
0-80	2928.72	N.A.	98.60
0-90	2962.85	N.A.	99.80
10-90	2823.77	N.A.	95.10
20-40	1109.5	N.A.	37.40
20-50	1631.4	N.A.	54.90
40-70	1178.58	N.A.	39.70
60-80	377.00	N.A.	12.70
70-80	121.51	N.A.	4.10
80-90	34.13	N.A.	1.10
90-110	5.44	N.A.	0.20
90-120	6.07	N.A.	0.20
90-130	6.35	N.A.	0.20
90-150	6.72	N.A.	0.20
90-180	6.93	N.A.	0.20
110-180	1.49	N.A.	0.10
0-180	2969.78	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	139.08
10-20	380.05
20-30	532.46
30-40	577.03
40-50	521.91
50-60	401.19
60-70	255.49
70-80	121.51
80-90	34.13
90-100	4.02
100-110	1.42
110-120	0.62
120-130	0.29
130-140	0.20
140-150	0.16
150-160	0.11
160-170	0.07
170-180	0.03

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	47	47	47	47	46	46	46	46	44	44	44	42	42	42	40	40	40	39
1	43	42	40	39	42	41	40	38	39	38	37	38	37	36	36	36	35	34
2	40	37	35	33	39	36	34	32	35	33	32	34	32	31	33	31	30	29
3	37	33	30	28	36	32	30	28	31	29	27	30	28	27	29	28	26	25
4	34	30	27	24	33	29	26	24	28	26	24	27	25	23	26	25	23	22
5	31	27	24	21	31	26	23	21	26	23	21	25	22	21	24	22	20	20
6	29	24	21	19	29	24	21	19	23	21	18	23	20	18	22	20	18	17
7	27	22	19	17	27	22	19	17	21	19	17	21	18	16	20	18	16	16
8	25	20	17	15	25	20	17	15	20	17	15	19	17	15	19	16	15	14
9	24	19	16	14	23	19	16	14	18	16	14	18	15	14	17	15	13	13
10	22	18	15	13	22	17	14	13	17	14	12	17	14	12	16	14	12	12

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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	16.3	17.8	16.6	18.1	18.4	15.5	17.0	15.9	17.3	17.6
	3H	17.3	18.7	17.7	19.0	19.4	16.6	18.0	17.0	18.3	18.7
	4H	17.7	18.9	18.1	19.3	19.6	17.0	18.3	17.4	18.6	19.0
	6H	17.8	19.0	18.2	19.3	19.7	17.2	18.4	17.6	18.7	19.1
	8H	17.8	18.9	18.2	19.3	19.7	17.3	18.4	17.7	18.8	19.2
	12H	17.8	18.9	18.3	19.3	19.7	17.3	18.4	17.7	18.7	19.2

UGR Viewed Endwise

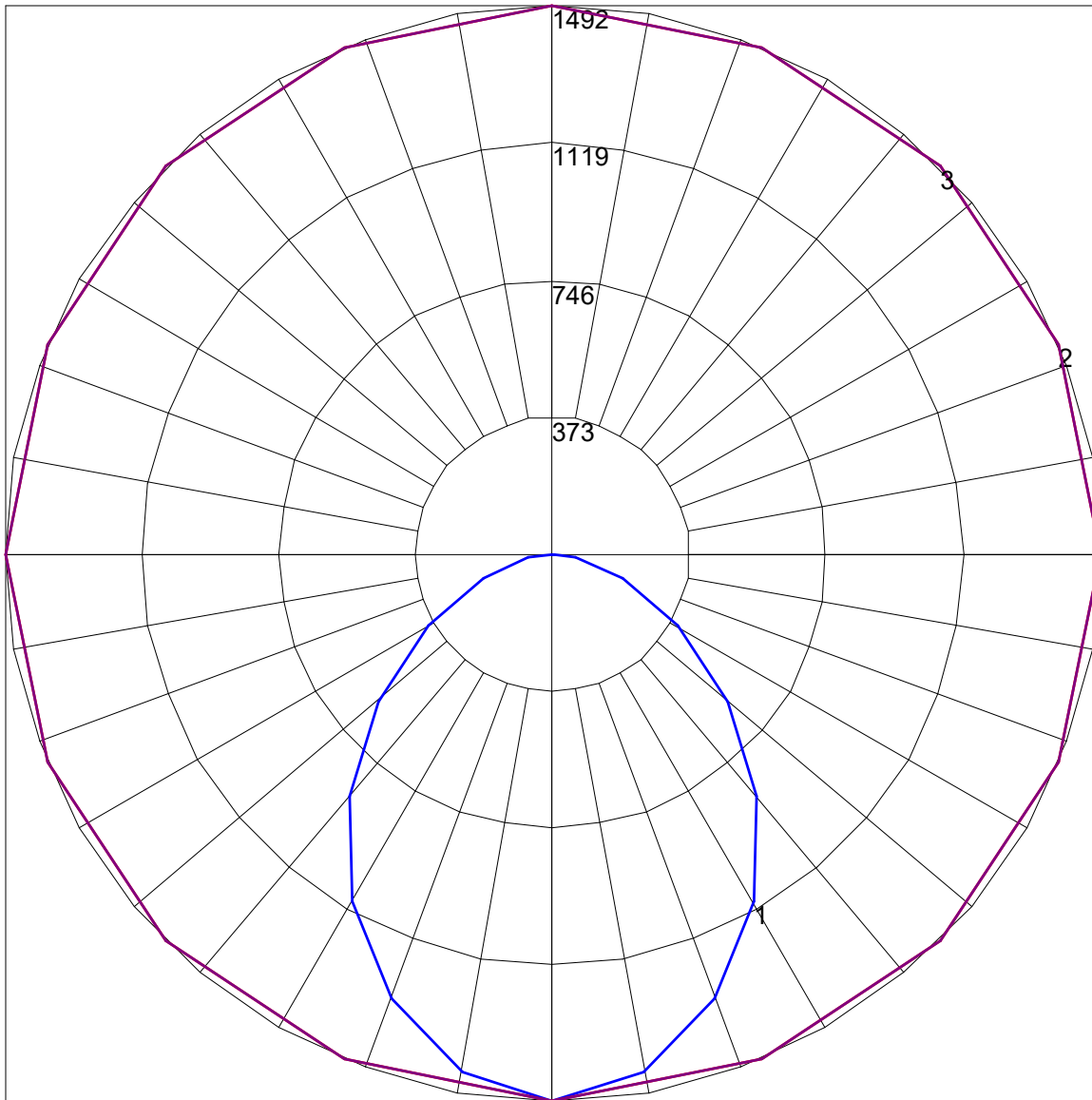
4H	2H	16.6	17.8	17.0	18.2	18.6	15.9	17.2	16.3	17.5	17.9
	3H	17.8	18.9	18.2	19.3	19.7	17.2	18.2	17.6	18.6	19.0
	4H	18.2	19.2	18.6	19.6	20.0	17.6	18.6	18.1	19.0	19.4
	6H	18.4	19.2	18.9	19.7	20.1	17.9	18.7	18.4	19.2	19.6
	8H	18.4	19.2	18.9	19.7	20.1	18.0	18.8	18.4	19.2	19.7
	12H	18.5	19.2	19.0	19.6	20.1	18.1	18.7	18.5	19.2	19.7
8H	4H	18.3	19.0	18.7	19.5	20.0	17.7	18.5	18.2	19.0	19.4
	6H	18.5	19.2	19.0	19.6	20.1	18.1	18.7	18.6	19.2	19.7
	8H	18.6	19.2	19.1	19.7	20.2	18.2	18.7	18.7	19.3	19.7
	12H	18.7	19.1	19.2	19.6	20.2	18.3	18.8	18.8	19.3	19.8
12H	4H	18.3	19.0	18.8	19.4	19.9	17.7	18.4	18.2	18.9	19.4
	6H	18.5	19.1	19.0	19.5	20.1	18.1	18.6	18.6	19.1	19.6
	8H	18.6	19.1	19.1	19.6	20.2	18.2	18.7	18.7	19.2	19.8

Maximum UGR = 20.2

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POLAR GRAPH



Maximum Candela = 1491.739 Located At Horizontal Angle = 0, Vertical Angle = 0

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

3 - Horizontal Cone Through Vertical Angle (0)