



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-14-L40-835-SAF125-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

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

[ISSUEDATE] 13 Feb. 2020

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

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] MCTG-14-L40-835-SAF125-DIM-UNV

[LUMINAIRE] 1x4 LED CLEANROOM LUMINAIRE

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3615
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	34
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	3207	2366	2078
55	2608	1747	1471
65	1955	1167	965
75	1275	642	539
85	654	241	213

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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>
0	1815.703	1815.703	1815.703	1815.703	1815.703
10	1744.096	1742.928	1735.066	1715.506	1718.039
20	1567.104	1553.689	1533.520	1514.240	1490.845
30	1329.319	1314.143	1264.031	1225.868	1204.799
40	1051.901	1031.692	961.456	909.398	889.357
50	758.110	730.560	668.783	614.997	591.127
60	479.836	459.762	412.809	373.310	359.112
70	244.461	233.334	206.091	188.589	181.343
80	80.933	73.066	67.212	64.220	65.098
90	5.368	6.313	7.029	7.308	7.560
100	1.471	2.097	2.432	2.421	2.136
110	0.721	1.029	1.107	1.219	1.253
120	0.308	0.369	0.442	0.559	0.531
130	0.475	0.280	0.291	0.358	0.302
140	0.280	0.263	0.313	0.335	0.363
150	0.436	0.324	0.358	0.302	0.235
160	0.207	0.268	0.252	0.308	0.319
170	0.140	0.224	0.352	0.386	0.335
180	0.425	0.425	0.425	0.425	0.425

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	631.87	N.A.	17.50
0-30	1279.96	N.A.	35.40
0-40	1982.31	N.A.	54.80
0-60	3105.88	N.A.	85.90
0-80	3564.75	N.A.	98.60
0-90	3606.3	N.A.	99.80
10-90	3437.01	N.A.	95.10
20-40	1350.45	N.A.	37.40
20-50	1985.7	N.A.	54.90
40-70	1434.54	N.A.	39.70
60-80	458.87	N.A.	12.70
70-80	147.90	N.A.	4.10
80-90	41.55	N.A.	1.10
90-110	6.62	N.A.	0.20
90-120	7.38	N.A.	0.20
90-130	7.73	N.A.	0.20
90-150	8.18	N.A.	0.20
90-180	8.44	N.A.	0.20
110-180	1.81	N.A.	0.10
0-180	3614.73	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	169.28
10-20	462.58
20-30	648.10
30-40	702.35
40-50	635.25
50-60	488.32
60-70	310.97
70-80	147.90
80-90	41.55
90-100	4.89
100-110	1.73
110-120	0.76
120-130	0.35
130-140	0.25
140-150	0.20
150-160	0.14
160-170	0.08
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	62	62	62	62	61	61	61	61	58	58	58	56	56	56	53	53	53	52
1	58	55	53	52	56	54	52	51	52	50	49	50	49	48	48	47	46	45
2	53	49	46	43	52	48	45	43	46	44	42	45	43	41	43	41	40	39
3	49	44	40	37	47	43	39	36	41	38	36	40	37	35	39	36	35	34
4	45	39	35	32	44	39	35	32	37	34	31	36	33	31	35	32	30	29
5	42	35	31	28	41	35	31	28	34	30	27	33	30	27	32	29	27	26
6	39	32	28	25	38	32	28	25	31	27	24	30	27	24	29	26	24	23
7	36	29	25	22	35	29	25	22	28	25	22	27	24	22	27	24	22	21
8	34	27	23	20	33	27	23	20	26	22	20	25	22	20	25	22	20	19
9	32	25	21	18	31	25	21	18	24	21	18	24	20	18	23	20	18	17
10	30	23	19	17	29	23	19	17	22	19	17	22	19	16	21	18	16	16

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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

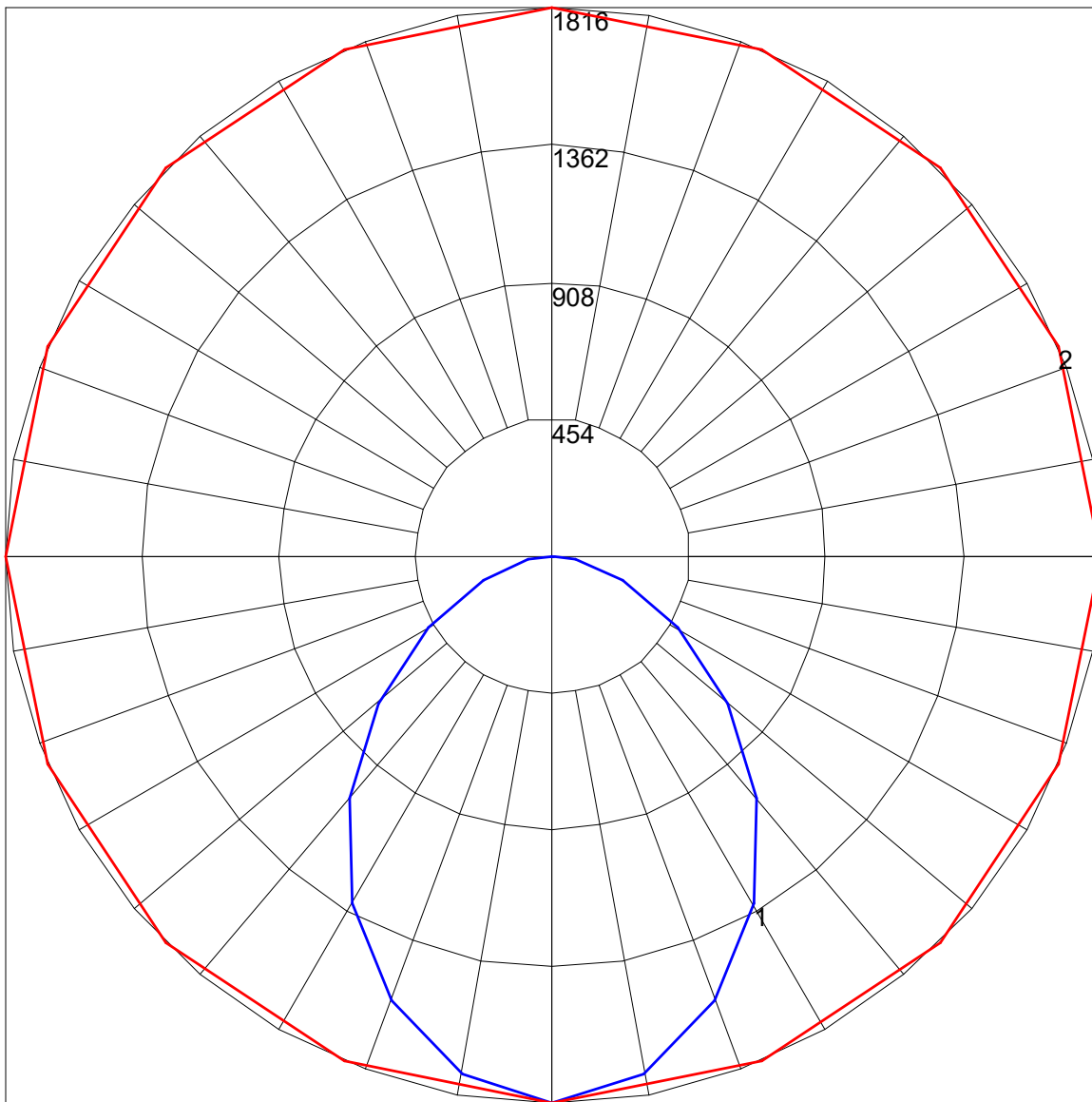
X=2H	Y=2H	16.7	18.2	17.0	18.5	18.8	15.2	16.7	15.6	17.0	17.3
	3H	17.9	19.2	18.3	19.6	19.9	16.3	17.7	16.7	18.0	18.4
	4H	18.3	19.5	18.7	19.9	20.3	16.7	18.0	17.1	18.3	18.7
	6H	18.5	19.6	18.9	20.0	20.4	16.9	18.1	17.3	18.4	18.8
	8H	18.5	19.6	19.0	20.0	20.4	17.0	18.1	17.4	18.5	18.9
	12H	18.6	19.6	19.0	20.0	20.4	17.0	18.1	17.4	18.4	18.9

UGR Viewed Endwise

4H	2H	16.9	18.1	17.3	18.5	18.9	15.6	16.9	16.0	17.2	17.6
	3H	18.2	19.3	18.7	19.7	20.1	16.9	17.9	17.3	18.3	18.7
	4H	18.7	19.7	19.2	20.1	20.5	17.3	18.3	17.8	18.7	19.1
	6H	19.0	19.8	19.5	20.3	20.7	17.6	18.4	18.1	18.9	19.3
	8H	19.1	19.8	19.5	20.3	20.8	17.7	18.5	18.1	18.9	19.4
	12H	19.1	19.8	19.6	20.3	20.8	17.8	18.4	18.2	18.9	19.4
8H	4H	18.8	19.5	19.2	20.0	20.4	17.4	18.2	17.9	18.7	19.1
	6H	19.1	19.7	19.6	20.2	20.7	17.8	18.4	18.3	18.9	19.4
	8H	19.2	19.7	19.7	20.3	20.7	17.9	18.4	18.4	19.0	19.4
	12H	19.3	19.8	19.8	20.3	20.8	18.0	18.5	18.5	19.0	19.5
12H	4H	18.7	19.4	19.2	19.9	20.4	17.4	18.1	17.9	18.6	19.1
	6H	19.1	19.6	19.6	20.1	20.6	17.8	18.3	18.3	18.8	19.3
	8H	19.2	19.7	19.7	20.2	20.7	17.9	18.4	18.4	18.9	19.5

Maximum UGR = 20.8

POLAR GRAPH



Maximum Candela = 1815.703 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.)