



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-22-L52-AMB-SAF12125-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 19833.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 13-FEB-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 3-42 LED 22" ARRAYS 2x2' RECESSED WHITE REFLECTOR LUMINAIRE

[MORE] PAT12 FROSTED ACRYLIC LENS IN DOOR

[LUMCAT] MCTG-22-L52-AMB-SAF12125-DIM-UNV

[LAMPCAT] HLM AMBER LED

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor, Classroom, Commercial, Healthcare, Institutional, Office, Direct, Clean Room

[\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5210
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
Total Luminaire Watts	55.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.57 ft
Luminous Width (90-270)	1.57 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	7827	7807	7918
55	6227	6107	6136
65	4610	4363	4358
75	3099	2659	2733
85	1008	599	980

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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>
<b>0</b>	2316.405	2316.405	2316.405	2316.405	2316.405
<b>5</b>	2310.398	2309.852	2308.214	2303.299	2303.299
<b>10</b>	2270.535	2277.088	2275.450	2272.174	2269.443
<b>15</b>	2208.830	2218.113	2217.021	2221.936	2218.113
<b>20</b>	2123.644	2134.565	2133.473	2154.770	2141.118
<b>25</b>	2005.148	2020.438	2032.451	2051.564	2030.813
<b>30</b>	1857.711	1885.560	1898.666	1906.311	1889.929
<b>35</b>	1683.516	1719.010	1725.563	1714.642	1708.635
<b>40</b>	1491.848	1507.684	1508.776	1501.677	1512.052
<b>45</b>	1273.422	1272.876	1270.146	1267.961	1288.166
<b>50</b>	1048.443	1032.608	1036.430	1027.693	1044.621
<b>55</b>	821.827	810.359	805.991	810.359	809.813
<b>60</b>	614.868	602.855	602.309	610.500	608.862
<b>65</b>	448.319	440.674	424.292	439.582	423.746
<b>70</b>	301.428	300.335	273.032	297.605	273.578
<b>75</b>	184.570	177.471	158.359	174.741	162.727
<b>80</b>	83.548	81.910	67.712	74.811	79.179
<b>85</b>	20.204	21.843	12.013	15.290	19.658
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	844.59	N.A.	16.20
0-30	1778.18	N.A.	34.10
0-40	2846.07	N.A.	54.60
0-60	4556.08	N.A.	87.50
0-80	5179.56	N.A.	99.40
0-90	5209.75	N.A.	100.00
10-90	4990.61	N.A.	95.80
20-40	2001.48	N.A.	38.40
20-50	2982.36	N.A.	57.20
40-70	2146.85	N.A.	41.20
60-80	623.47	N.A.	12.00
70-80	186.64	N.A.	3.60
80-90	30.19	N.A.	0.60
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	5209.75	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	219.14
10-20	625.45
20-30	933.59
30-40	1067.89
40-50	980.88
50-60	729.13
60-70	436.83
70-80	186.64
80-90	30.19
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	119	119	119	119	116	116	116	116	111	111	111	107	107	107	102	102	102	100
1	111	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44
7	69	56	48	42	67	55	48	42	54	47	42	52	46	41	51	45	41	39
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35
9	60	47	40	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32
10	57	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

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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	17.7	19.2	18.0	19.5	19.8	17.7	19.2	18.1	19.5	19.8
	3H	18.8	20.2	19.2	20.5	20.9	18.8	20.1	19.1	20.4	20.8
	4H	19.2	20.5	19.6	20.8	21.2	19.1	20.3	19.5	20.7	21.1
	6H	19.4	20.5	19.8	20.9	21.3	19.2	20.4	19.6	20.7	21.1
	8H	19.4	20.5	19.8	20.9	21.3	19.2	20.3	19.6	20.7	21.1
	12H	19.4	20.4	19.8	20.8	21.3	19.2	20.3	19.7	20.7	21.1

### UGR Viewed Endwise

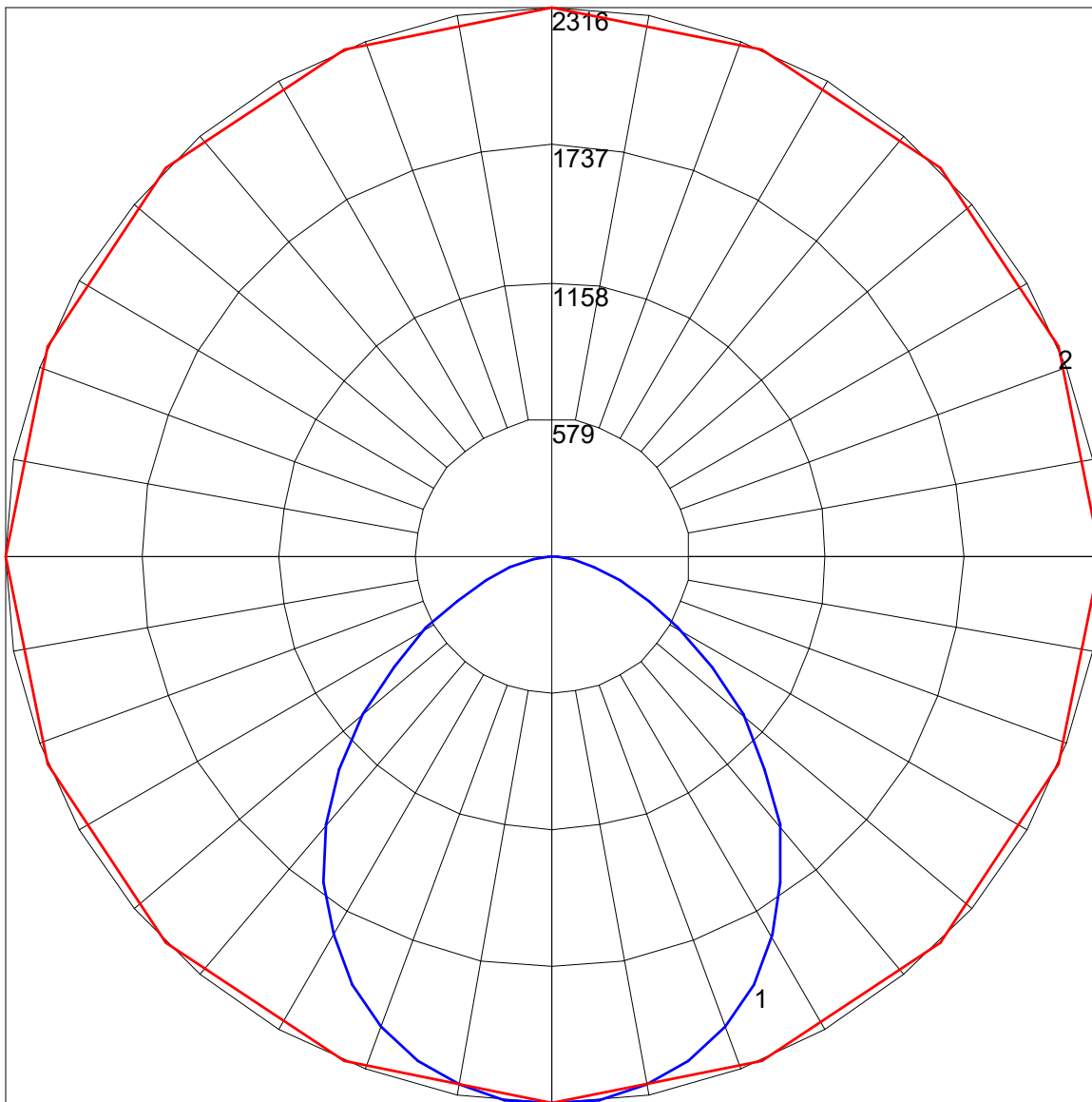
4H	2H	18.0	19.3	18.4	19.7	20.0	18.1	19.3	18.5	19.7	20.0
	3H	19.4	20.4	19.8	20.8	21.2	19.3	20.4	19.8	20.8	21.2
	4H	19.8	20.8	20.3	21.2	21.6	19.7	20.7	20.1	21.1	21.5
	6H	20.1	20.9	20.5	21.3	21.8	19.9	20.7	20.4	21.2	21.7
	8H	20.1	20.9	20.6	21.3	21.8	20.0	20.7	20.4	21.2	21.6
	12H	20.1	20.8	20.6	21.3	21.7	20.0	20.6	20.5	21.1	21.6

8H	4H	19.9	20.7	20.4	21.1	21.6	19.8	20.6	20.3	21.0	21.5
	6H	20.2	20.8	20.7	21.3	21.8	20.1	20.7	20.6	21.2	21.7
	8H	20.3	20.8	20.8	21.3	21.8	20.1	20.7	20.6	21.2	21.7
	12H	20.3	20.8	20.8	21.3	21.9	20.1	20.6	20.6	21.1	21.7

12H	4H	19.9	20.6	20.4	21.1	21.5	19.8	20.5	20.3	21.0	21.4
	6H	20.2	20.8	20.7	21.2	21.8	20.1	20.6	20.6	21.1	21.6
	8H	20.3	20.8	20.8	21.3	21.8	20.1	20.6	20.6	21.1	21.7

Maximum UGR = 21.9

POLAR GRAPH



Maximum Candela = 2316.405 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.)