



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-22-L82-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-L82-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	8271
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	65
Total Luminaire Watts	126.5
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	12425	12394	12569
55	9886	9695	9741
65	7319	6927	6918
75	4920	4222	4338
85	1599	951	1556

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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>	3677.348	3677.348	3677.348	3677.348	3677.348
<b>5</b>	3667.812	3666.946	3664.345	3656.543	3656.543
<b>10</b>	3604.529	3614.932	3612.331	3607.130	3602.796
<b>15</b>	3506.571	3521.308	3519.574	3527.376	3521.308
<b>20</b>	3371.336	3388.674	3386.940	3420.749	3399.076
<b>25</b>	3183.221	3207.494	3226.565	3256.906	3223.965
<b>30</b>	2949.160	2993.372	3014.177	3026.314	3000.307
<b>35</b>	2672.622	2728.970	2739.373	2722.035	2712.499
<b>40</b>	2368.344	2393.484	2395.218	2383.948	2400.419
<b>45</b>	2021.588	2020.721	2016.387	2012.919	2044.994
<b>50</b>	1664.429	1639.289	1645.358	1631.487	1658.361
<b>55</b>	1304.670	1286.465	1279.530	1286.465	1285.598
<b>60</b>	976.118	957.047	956.180	969.183	966.583
<b>65</b>	711.717	699.580	673.574	697.847	672.707
<b>70</b>	478.523	476.790	433.445	472.455	434.312
<b>75</b>	293.009	281.739	251.398	277.405	258.333
<b>80</b>	132.634	130.034	107.494	118.764	125.699
<b>85</b>	32.075	34.676	19.072	24.273	31.208
<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	1340.81	N.A.	16.20
0-30	2822.9	N.A.	34.10
0-40	4518.2	N.A.	54.60
0-60	7232.89	N.A.	87.50
0-80	8222.67	N.A.	99.40
0-90	8270.6	N.A.	100.00
10-90	7922.71	N.A.	95.80
20-40	3177.39	N.A.	38.40
20-50	4734.56	N.A.	57.20
40-70	3408.17	N.A.	41.20
60-80	989.78	N.A.	12.00
70-80	296.29	N.A.	3.60
80-90	47.93	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	8270.6	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	347.89
10-20	992.92
20-30	1482.09
30-40	1695.3
40-50	1557.17
50-60	1157.52
60-70	693.48
70-80	296.29
80-90	47.93
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	189	189	189	189	185	185	185	185	176	176	176	169	169	169	162	162	162	159
1	175	169	163	158	171	165	160	155	159	154	150	152	149	146	147	144	141	138
2	161	150	140	132	157	147	138	131	141	134	128	136	130	125	131	126	122	119
3	148	133	122	112	145	131	120	111	126	117	110	122	114	108	118	112	106	103
4	137	119	107	97	133	117	106	96	114	103	95	110	101	94	107	99	93	89
5	126	108	94	85	123	106	94	84	103	92	83	100	90	83	97	88	82	79
6	117	98	84	75	114	96	84	75	93	82	74	91	81	73	88	80	73	70
7	109	89	76	67	106	88	75	67	85	74	66	83	73	66	81	72	65	62
8	102	82	69	60	99	80	68	60	78	67	60	77	67	59	75	66	59	56
9	95	75	63	54	93	74	62	54	72	62	54	71	61	54	69	60	53	51
10	90	70	58	50	88	69	57	49	67	57	49	66	56	49	64	55	49	46

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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

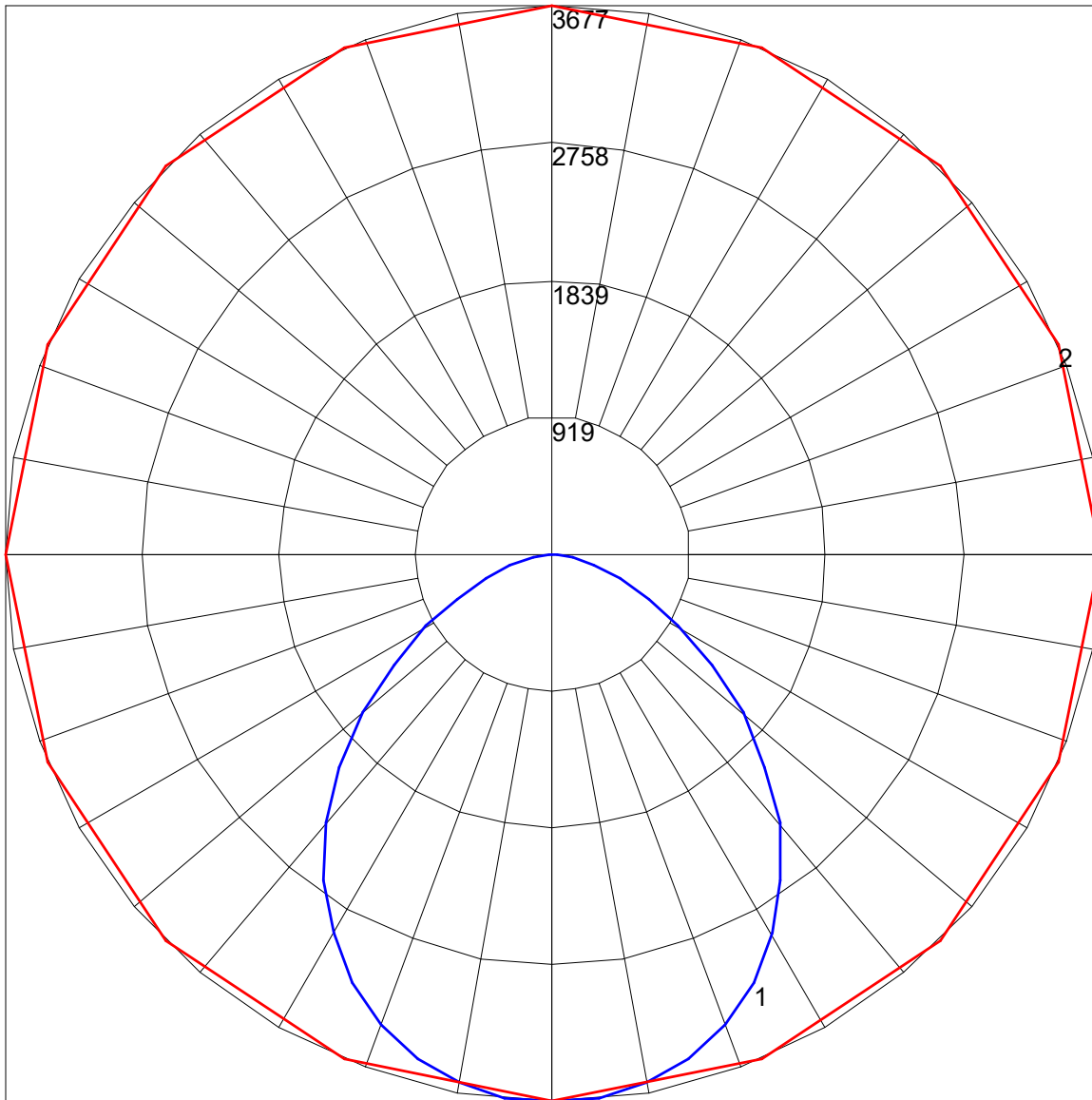
4H	2H	18.0	19.3	18.4	19.7	20.0	18.1	19.3	18.5	19.7	20.0
	3H	19.4	20.4	19.8	20.8	21.2	19.3	20.4	19.8	20.8	21.2
	4H	19.8	20.8	20.3	21.2	21.6	19.7	20.7	20.1	21.1	21.5
	6H	20.1	20.9	20.5	21.3	21.8	19.9	20.7	20.4	21.2	21.7
	8H	20.1	20.9	20.6	21.3	21.8	20.0	20.7	20.4	21.2	21.6
	12H	20.1	20.8	20.6	21.3	21.7	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 = 3677.348 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.)