



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-24-L121-940-FAF19156-(L100)-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19835.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 06-08-2023

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2' x 4' RECESSED CLEANROOM LED LUMINAIRE

[MORE] PAT12 ACRYLIC LENS w/CLEAR ACRYLIC LENS IN DOOR

[LUMCAT] MCTG-24-L121-940-FAF19156-(L100)-DIM-UNV

[LAMP] 6 - 22" LED ARRAYS

[LAMPCAT] HLM 90 CRI 4000K CCT

[\_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	8806
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
Total Luminaire Watts	74
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.57 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	5958	5926	5765
55	4926	4828	4557
65	3571	3529	3275
75	2126	2189	2170
85	464	641	659

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MCTG-24-L121-940-FAF19156-(L100)-DIM-UNV\_.IES****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>	3836.235	3836.235	3836.235	3836.235	3836.235
<b>5</b>	3855.269	3831.160	3808.743	3799.861	3800.707
<b>10</b>	3797.746	3771.523	3756.719	3746.991	3748.683
<b>15</b>	3704.272	3680.164	3673.396	3652.671	3663.245
<b>20</b>	3568.926	3549.469	3550.315	3521.131	3533.397
<b>25</b>	3384.093	3372.673	3366.751	3337.567	3353.640
<b>30</b>	3162.462	3156.541	3136.662	3099.441	3117.629
<b>35</b>	2886.270	2892.192	2855.394	2796.180	2830.017
<b>40</b>	2557.208	2585.547	2526.332	2460.351	2500.955
<b>45</b>	2201.923	2234.068	2190.080	2110.141	2130.443
<b>50</b>	1841.562	1825.067	1830.565	1741.744	1739.206
<b>55</b>	1476.549	1441.020	1447.365	1365.311	1366.157
<b>60</b>	1114.919	1089.965	1083.197	1008.757	1021.868
<b>65</b>	788.818	773.169	779.513	722.836	723.259
<b>70</b>	516.010	500.783	518.970	496.131	484.711
<b>75</b>	287.612	284.651	296.071	306.645	293.533
<b>80</b>	121.812	117.583	133.232	152.265	136.193
<b>85</b>	21.148	23.686	29.184	43.142	30.030
<b>90</b>	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MCTG-24-L121-940-FAF19156-(L100)-DIM-UNV\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1398.29	N.A.	15.90
0-30	2944.35	N.A.	33.40
0-40	4722.4	N.A.	53.60
0-60	7668.09	N.A.	87.10
0-80	8753.3	N.A.	99.40
0-90	8806.03	N.A.	100.00
10-90	8443.41	N.A.	95.90
20-40	3324.1	N.A.	37.70
20-50	4997.04	N.A.	56.70
40-70	3707.79	N.A.	42.10
60-80	1085.21	N.A.	12.30
70-80	323.12	N.A.	3.70
80-90	52.73	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	8806.03	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	362.62
10-20	1035.68
20-30	1546.05
30-40	1778.05
40-50	1672.94
50-60	1272.76
60-70	762.09
70-80	323.12
80-90	52.73
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

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-24-L121-940-FAF19156-(L100)-DIM-UNV\_.IES

## 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	106	106	106	102	102	102	100
1	110	106	102	99	108	104	101	98	100	97	94	96	94	92	92	91	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	56
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	41	53	46	41	52	46	41	51	45	41	39
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	43	37	33	31
10	56	43	36	31	55	43	36	31	42	35	31	41	35	30	40	34	30	29

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-24-L121-940-FAF19156-(L100)-DIM-UNV\_.IES

## 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

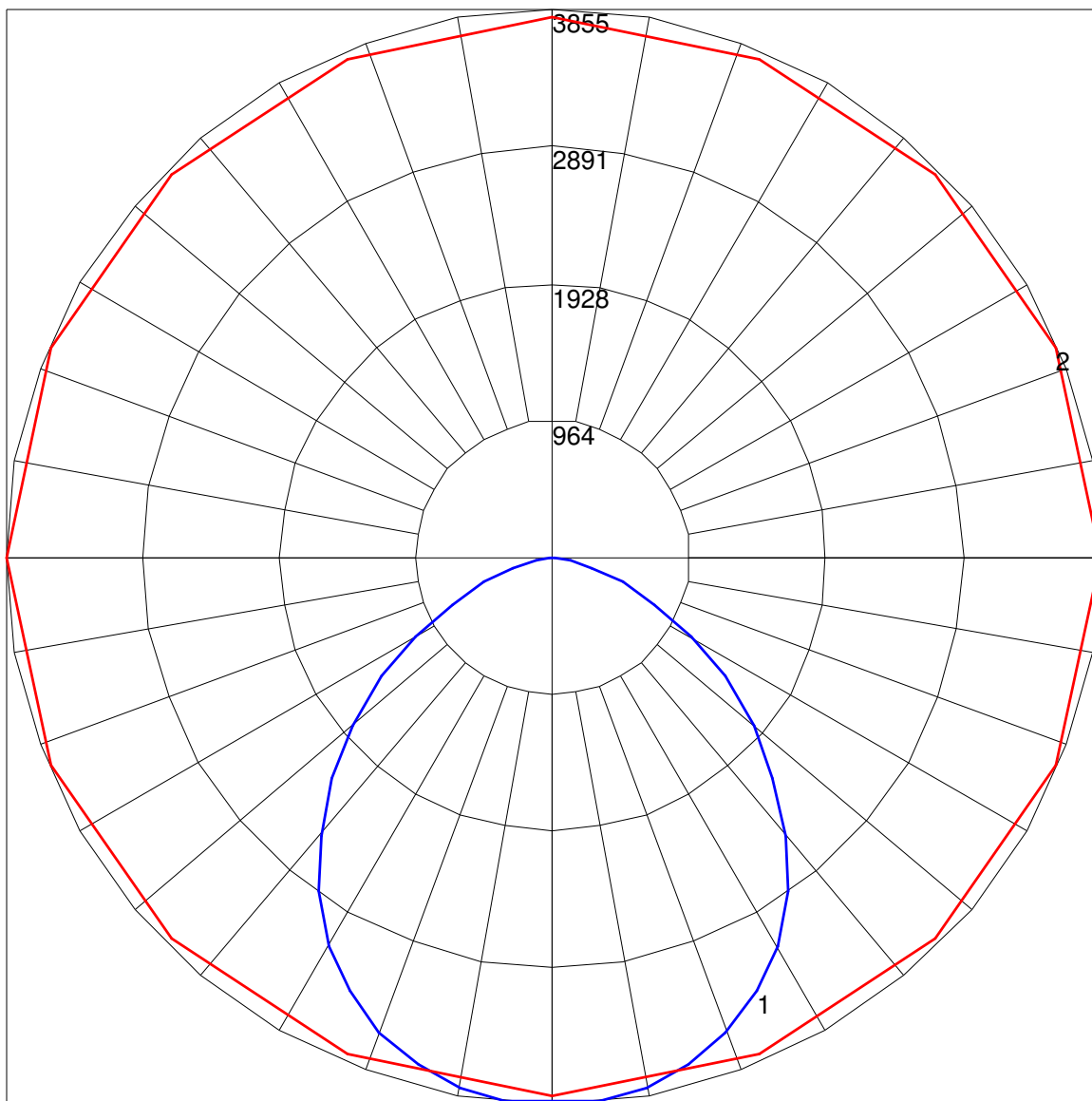
X=2H	Y=2H	17.1	18.6	17.5	18.9	19.3	16.6	18.2	17.0	18.5	18.8
	3H	18.2	19.6	18.6	19.9	20.2	17.8	19.1	18.1	19.4	19.8
	4H	18.5	19.7	18.9	20.1	20.5	18.1	19.4	18.5	19.7	20.1
	6H	18.6	19.8	19.0	20.1	20.5	18.3	19.4	18.7	19.8	20.2
	8H	18.6	19.7	19.0	20.1	20.5	18.3	19.4	18.7	19.8	20.2
	12H	18.6	19.6	19.0	20.0	20.4	18.3	19.3	18.7	19.7	20.2

### UGR Viewed Endwise

4H	2H	17.5	18.8	17.9	19.1	19.5	17.1	18.4	17.5	18.7	19.1
	3H	18.8	19.8	19.2	20.2	20.6	18.4	19.5	18.8	19.9	20.3
	4H	19.1	20.1	19.6	20.5	20.9	18.9	19.8	19.3	20.2	20.6
	6H	19.3	20.1	19.8	20.5	21.0	19.1	19.9	19.6	20.4	20.8
	8H	19.3	20.1	19.7	20.5	21.0	19.1	19.9	19.6	20.3	20.8
	12H	19.3	20.0	19.8	20.4	20.9	19.1	19.8	19.6	20.3	20.8
8H	4H	19.2	20.0	19.7	20.4	20.9	19.0	19.7	19.4	20.2	20.6
	6H	19.4	20.1	19.9	20.5	21.0	19.3	19.9	19.8	20.4	20.9
	8H	19.5	20.0	20.0	20.5	21.0	19.4	19.9	19.9	20.4	20.9
	12H	19.5	19.9	20.0	20.4	21.0	19.4	19.9	19.9	20.4	20.9
12H	4H	19.2	19.9	19.7	20.4	20.8	19.0	19.6	19.4	20.1	20.6
	6H	19.4	20.0	20.0	20.5	21.0	19.3	19.8	19.8	20.3	20.8
	8H	19.5	20.0	20.0	20.5	21.0	19.4	19.9	19.9	20.4	20.9

Maximum UGR = 21.0

POLAR GRAPH



Maximum Candela = 3855.269 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)