



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-24-L60-840-SAF12125-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] 04/07/2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4'RECESSED WHITE REFLECTOR LUMINAIRE

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

[LUMCAT] MCTG-24-L60-840-SAF12125-DIM-UNV

[LAMPCAT] HLM 80 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	6260
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	134
Total Luminaire Watts	46.7
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	4236	4213	4098
55	3501	3432	3240
65	2539	2509	2328
75	1511	1556	1543
85	330	455	469

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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>	2727.099	2727.099	2727.099	2727.099	2727.099
<b>5</b>	2740.629	2723.491	2707.555	2701.241	2701.842
<b>10</b>	2699.738	2681.096	2670.572	2663.657	2664.860
<b>15</b>	2633.289	2616.151	2611.340	2596.607	2604.124
<b>20</b>	2537.074	2523.243	2523.844	2503.098	2511.817
<b>25</b>	2405.680	2397.562	2393.352	2372.606	2384.032
<b>30</b>	2248.128	2243.918	2229.787	2203.327	2216.256
<b>35</b>	2051.789	2055.998	2029.839	1987.745	2011.799
<b>40</b>	1817.865	1838.010	1795.916	1749.011	1777.876
<b>45</b>	1565.301	1588.152	1556.882	1500.055	1514.487
<b>50</b>	1309.128	1297.401	1301.310	1238.169	1236.365
<b>55</b>	1049.647	1024.391	1028.901	970.571	971.172
<b>60</b>	792.572	774.833	770.022	717.104	726.425
<b>65</b>	560.754	549.629	554.139	513.849	514.150
<b>70</b>	366.820	355.996	368.925	352.689	344.571
<b>75</b>	204.457	202.353	210.471	217.987	208.667
<b>80</b>	86.594	83.587	94.712	108.242	96.817
<b>85</b>	15.034	16.838	20.746	30.669	21.348
<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	994.02	N.A.	15.90
0-30	2093.08	N.A.	33.40
0-40	3357.05	N.A.	53.60
0-60	5451.08	N.A.	87.10
0-80	6222.53	N.A.	99.40
0-90	6260.02	N.A.	100.00
10-90	6002.24	N.A.	95.90
20-40	2363.03	N.A.	37.70
20-50	3552.29	N.A.	56.70
40-70	2635.79	N.A.	42.10
60-80	771.45	N.A.	12.30
70-80	229.70	N.A.	3.70
80-90	37.48	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	6260.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	257.78
10-20	736.24
20-30	1099.06
30-40	1263.98
40-50	1189.26
50-60	904.78
60-70	541.76
70-80	229.70
80-90	37.48
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	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

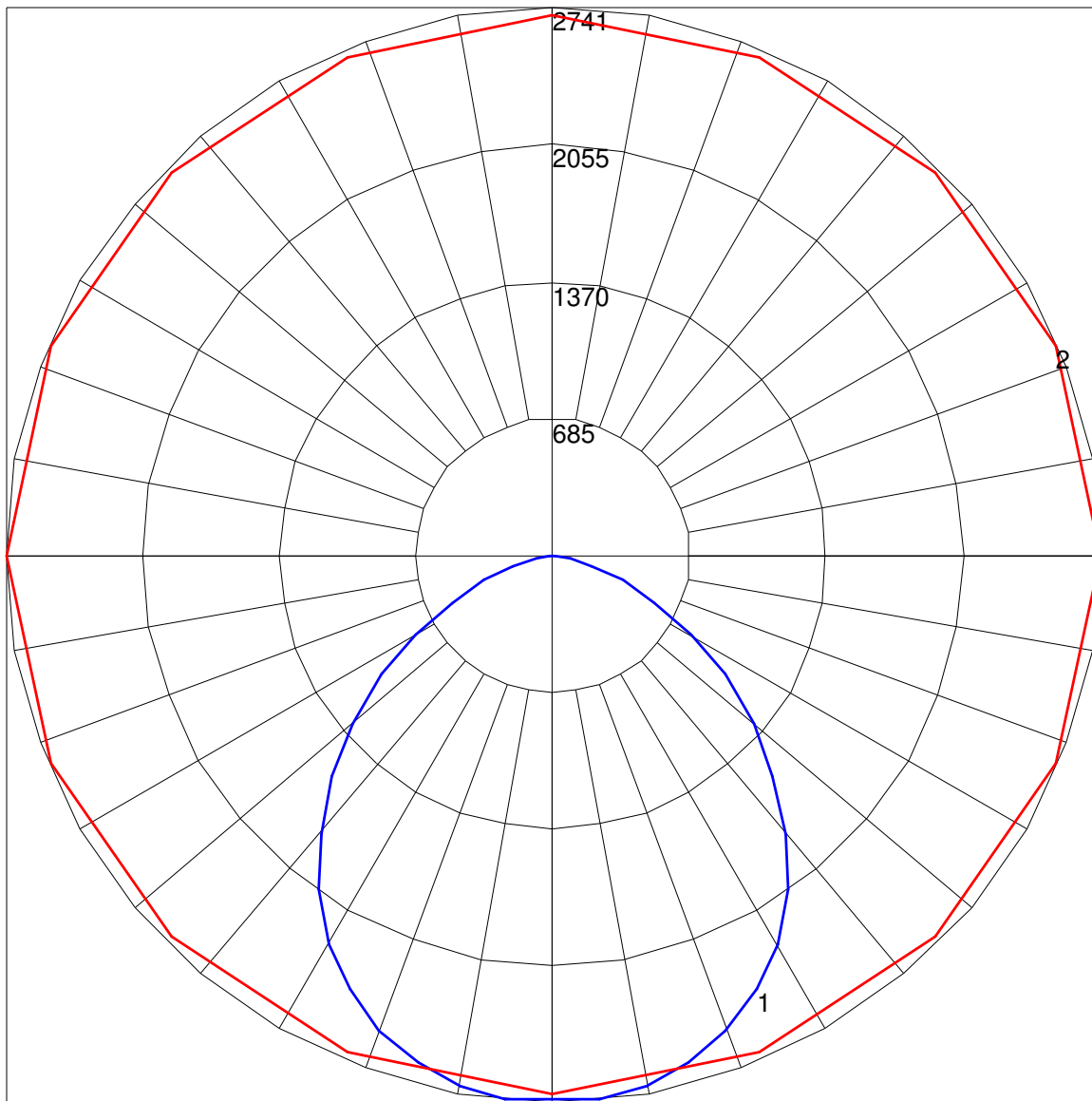
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**UGR TABLE - CORRECTED**

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					UGR Viewed Endwise				
X=2H	Y=2H	15.9	17.4	16.3	17.7	18.1	15.4	17.0	15.8	17.3	17.6
	3H	17.0	18.4	17.4	18.7	19.0	16.6	17.9	16.9	18.2	18.6
	4H	17.3	18.5	17.7	18.9	19.3	16.9	18.2	17.3	18.5	18.9
	6H	17.4	18.6	17.8	18.9	19.3	17.1	18.2	17.5	18.6	19.0
	8H	17.4	18.5	17.8	18.9	19.3	17.1	18.2	17.5	18.6	19.0
	12H	17.4	18.4	17.8	18.8	19.2	17.1	18.1	17.5	18.5	19.0
4H	2H	16.3	17.6	16.7	17.9	18.3	15.9	17.2	16.3	17.5	17.9
	3H	17.6	18.6	18.0	19.0	19.4	17.2	18.3	17.6	18.7	19.1
	4H	17.9	18.9	18.4	19.3	19.7	17.7	18.6	18.1	19.0	19.4
	6H	18.1	18.9	18.6	19.3	19.8	17.9	18.7	18.4	19.2	19.6
	8H	18.1	18.9	18.5	19.3	19.8	17.9	18.7	18.4	19.1	19.6
	12H	18.1	18.8	18.6	19.2	19.7	17.9	18.6	18.4	19.1	19.6
8H	4H	18.0	18.8	18.5	19.2	19.7	17.8	18.5	18.2	19.0	19.4
	6H	18.2	18.9	18.7	19.3	19.8	18.1	18.7	18.6	19.2	19.7
	8H	18.3	18.8	18.8	19.3	19.8	18.2	18.7	18.7	19.2	19.7
	12H	18.3	18.7	18.8	19.2	19.8	18.2	18.7	18.7	19.2	19.7
12H	4H	18.0	18.7	18.5	19.2	19.6	17.8	18.4	18.2	18.9	19.4
	6H	18.2	18.8	18.8	19.3	19.8	18.1	18.6	18.6	19.1	19.6
	8H	18.3	18.8	18.8	19.3	19.8	18.2	18.7	18.7	19.2	19.7

Maximum UGR = 19.8

POLAR GRAPH



Maximum Candela = 2740.629 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.)