



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-22-L18-RED-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] 17-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 ACRYLIC LENS w/CLEAR ACRYLIC LENS IN DOOR

[LUMCAT] MCTG-22-L18-RED-SAF12125-DIM-UNV

[\_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	1816
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	41
Total Luminaire Watts	44.6
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	2728	2721	2760
55	2171	2129	2139
65	1607	1521	1519
75	1080	927	952
85	351	209	342

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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>	807.407	807.407	807.407	807.407	807.407
<b>5</b>	805.313	805.123	804.552	802.839	802.839
<b>10</b>	791.419	793.703	793.132	791.990	791.038
<b>15</b>	769.911	773.146	772.766	774.479	773.146
<b>20</b>	740.218	744.025	743.644	751.067	746.309
<b>25</b>	698.915	704.245	708.432	715.094	707.861
<b>30</b>	647.524	657.232	661.800	664.464	658.754
<b>35</b>	586.807	599.179	601.463	597.656	595.563
<b>40</b>	519.999	525.519	525.899	523.425	527.042
<b>45</b>	443.864	443.674	442.722	441.961	449.004
<b>50</b>	365.446	359.926	361.258	358.213	364.114
<b>55</b>	286.456	282.459	280.937	282.459	282.269
<b>60</b>	214.319	210.131	209.941	212.796	212.225
<b>65</b>	156.266	153.601	147.891	153.221	147.701
<b>70</b>	105.066	104.685	95.168	103.733	95.359
<b>75</b>	64.334	61.859	55.198	60.908	56.720
<b>80</b>	29.121	28.550	23.602	26.076	27.599
<b>85</b>	7.042	7.613	4.187	5.329	6.852
<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	294.39	N.A.	16.20
0-30	619.80	N.A.	34.10
0-40	992.03	N.A.	54.60
0-60	1588.07	N.A.	87.50
0-80	1805.39	N.A.	99.40
0-90	1815.91	N.A.	100.00
10-90	1739.53	N.A.	95.80
20-40	697.64	N.A.	38.40
20-50	1039.53	N.A.	57.20
40-70	748.31	N.A.	41.20
60-80	217.32	N.A.	12.00
70-80	65.05	N.A.	3.60
80-90	10.52	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	1815.91	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	76.38
10-20	218.01
20-30	325.41
30-40	372.22
40-50	341.90
50-60	254.15
60-70	152.26
70-80	65.05
80-90	10.52
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	192	192	192	192	188	188	188	188	180	180	180	172	172	172	165	165	165	162
1	178	172	166	160	174	168	163	158	161	157	153	155	152	148	149	147	144	141
2	164	152	143	134	160	149	140	133	144	136	130	139	132	127	134	129	124	121
3	151	136	124	114	147	133	122	113	129	119	111	124	116	110	120	113	108	104
4	139	122	109	99	136	119	107	98	116	105	97	112	103	95	108	101	94	91
5	129	110	96	86	125	108	95	86	104	93	85	101	92	84	98	90	83	80
6	119	99	86	76	116	98	85	76	95	84	75	92	82	75	90	81	74	71
7	111	91	77	68	108	89	77	68	87	76	67	85	74	67	82	73	66	63
8	104	83	70	61	101	82	70	61	80	69	61	78	68	60	76	67	60	57
9	97	76	64	55	95	76	63	55	74	63	55	72	62	55	70	61	54	52
10	91	71	59	50	89	70	58	50	68	58	50	67	57	50	66	56	50	47

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## UGR TABLE - CORRECTED

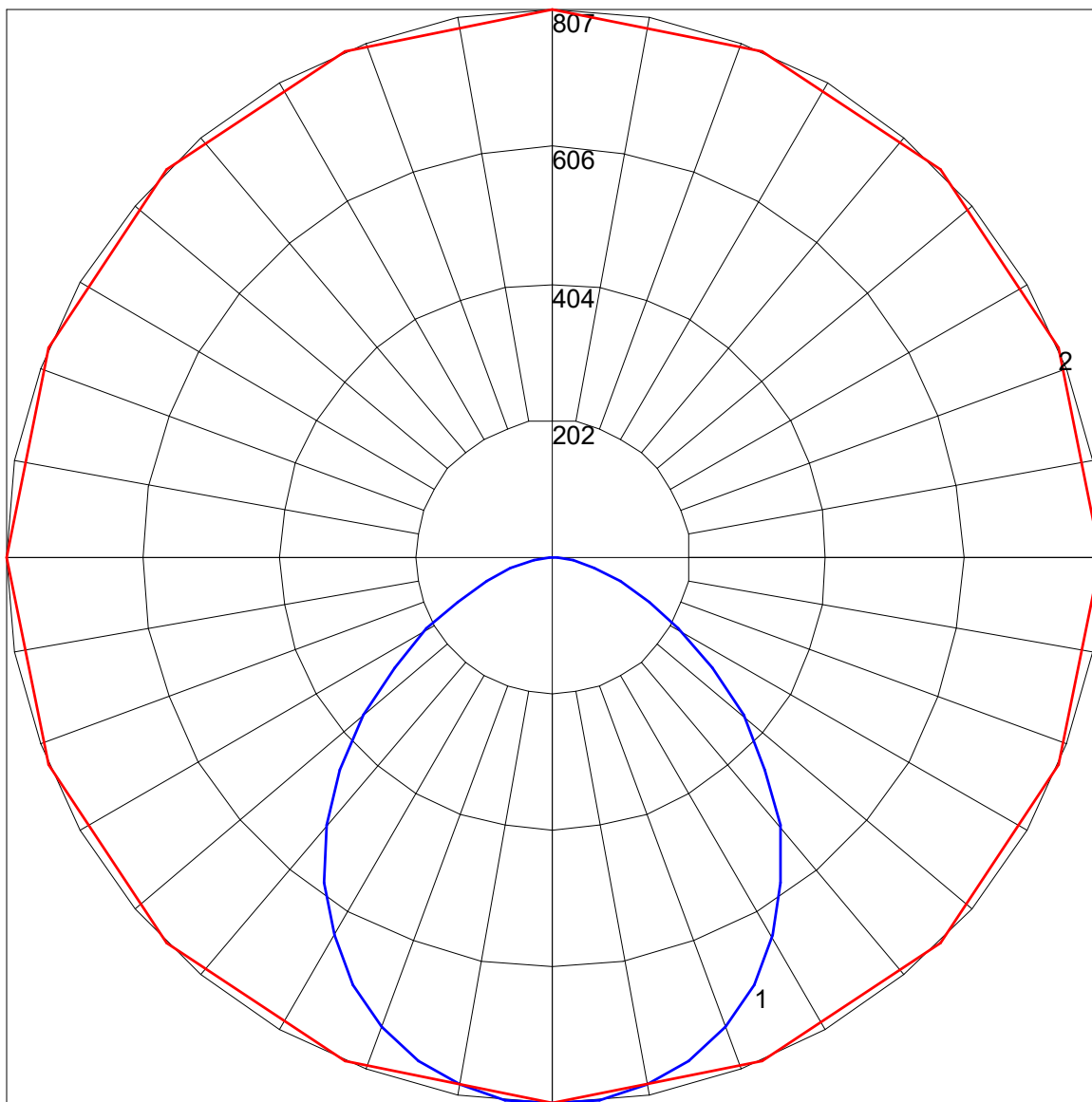
### Reflectances

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	12.4	13.9	12.7	14.2	14.5	12.4	13.9	12.8	14.2	14.5
	3H	13.5	14.9	13.9	15.2	15.6	13.5	14.8	13.8	15.1	15.5
	4H	13.9	15.2	14.3	15.5	15.9	13.8	15.0	14.2	15.4	15.8
	6H	14.1	15.2	14.5	15.6	16.0	13.9	15.1	14.3	15.4	15.8
	8H	14.1	15.2	14.5	15.6	16.0	13.9	15.0	14.3	15.4	15.8
	12H	14.1	15.1	14.5	15.5	15.9	13.9	15.0	14.3	15.4	15.8
4H	2H	12.7	14.0	13.1	14.4	14.7	12.8	14.0	13.2	14.4	14.7
	3H	14.1	15.1	14.5	15.5	15.9	14.0	15.1	14.4	15.5	15.9
	4H	14.5	15.5	15.0	15.9	16.3	14.4	15.3	14.8	15.8	16.2
	6H	14.8	15.6	15.2	16.0	16.5	14.6	15.4	15.1	15.9	16.3
	8H	14.8	15.6	15.3	16.0	16.5	14.7	15.4	15.1	15.9	16.3
	12H	14.8	15.5	15.3	16.0	16.4	14.7	15.3	15.2	15.8	16.3
8H	4H	14.6	15.4	15.1	15.8	16.3	14.5	15.3	15.0	15.7	16.2
	6H	14.9	15.5	15.4	16.0	16.5	14.8	15.4	15.3	15.9	16.4
	8H	15.0	15.5	15.5	16.0	16.5	14.8	15.4	15.3	15.9	16.4
	12H	15.0	15.5	15.5	16.0	16.6	14.8	15.3	15.3	15.8	16.4
12H	4H	14.6	15.3	15.1	15.8	16.2	14.5	15.2	15.0	15.7	16.1
	6H	14.9	15.5	15.4	15.9	16.5	14.8	15.3	15.3	15.8	16.3
	8H	15.0	15.5	15.5	16.0	16.5	14.8	15.3	15.3	15.8	16.4

Maximum UGR = 16.6

POLAR GRAPH



Maximum Candela = 807.407 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.)