



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-24-L98-AMB-L74-835-SAF125 AMBER ONLY\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-1995

[TEST] GEN from BALLABS TEST NO. 20884.0

[ISSUE DATE] 24 FEB 2020

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

[LUMINAIRE] 4-56 LED 35K & 2/56 LED AMBER 22" ARRAY 2X4'RECESSED TROFFER

[LUMINAIRE] WHITE REFL w/.15" FROST ACRYLIC LENS/.085"CLEAR ACRYLIC LENS

[LUMCAT] MCTG-24-L98/AMB-L74/835-SAF125-DIM-UNV AMBER ONLY

### CHARACTERISTICS

Lumens Per Lamp	5339 (1 lamp)
Total Lamp Lumens	5339
Luminaire Lumens	8888
Total Luminaire Efficiency	166 %
Luminaire Efficacy Rating (LER)	82
Total Luminaire Watts	108.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.56 ft
Luminous Width (90-270)	1.56 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5920	5857	5916
55	5080	5002	5041
65	3908	3892	3915
75	2334	2396	2334
85	553	553	516

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0</b>	3863.334	3863.334	3863.334	3863.334	3863.334
<b>5</b>	3888.291	3850.024	3825.067	3816.748	3820.075
<b>10</b>	3813.420	3771.825	3753.524	3746.868	3751.860
<b>15</b>	3688.636	3660.351	3638.722	3630.403	3638.722
<b>20</b>	3522.256	3492.308	3474.006	3478.997	3492.308
<b>25</b>	3325.928	3294.316	3276.014	3282.669	3290.988
<b>30</b>	3089.669	3051.402	3039.755	3051.402	3058.057
<b>35</b>	2790.186	2771.884	2760.237	2770.220	2781.867
<b>40</b>	2490.703	2474.065	2460.754	2470.737	2479.056
<b>45</b>	2167.926	2154.616	2144.633	2157.943	2166.262
<b>50</b>	1836.831	1818.529	1821.857	1821.857	1843.486
<b>55</b>	1509.063	1485.770	1485.770	1490.761	1497.416
<b>60</b>	1181.295	1169.649	1166.321	1166.321	1166.321
<b>65</b>	855.191	858.519	851.864	846.872	856.855
<b>70</b>	570.682	560.699	575.673	567.354	565.691
<b>75</b>	312.794	322.776	321.113	316.121	312.794
<b>80</b>	123.121	126.448	131.440	131.440	134.767
<b>85</b>	24.957	26.621	24.957	23.293	23.293
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	1391.75	26.10	15.70
0-30	2905.59	54.40	32.70
0-40	4638.58	86.90	52.20
0-60	7636.34	143.00	85.90
0-80	8839.3	165.60	99.50
0-90	8888.01	166.50	100.00
10-90	8524.08	159.70	95.90
20-40	3246.83	60.80	36.50
20-50	4908.42	91.90	55.20
40-70	3849.28	72.10	43.30
60-80	1202.96	22.50	13.50
70-80	351.44	6.60	4.00
80-90	48.71	0.90	0.50
90-110	0.00	0.00	0.00
90-120	0.00	0.00	0.00
90-130	0.00	0.00	0.00
90-150	0.00	0.00	0.00
90-180	0.00	0.00	0.00
110-180	0.00	0.00	0.00
0-180	8888.01	166.50	100.00

Total Luminaire Efficiency = 166.50%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	363.93
10-20	1027.82
20-30	1513.84
30-40	1732.99
40-50	1661.59
50-60	1336.17
60-70	851.52
70-80	351.44
80-90	48.71
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	198	198	198	198	194	194	194	194	185	185	185	177	177	177	170	170	170	166
1	183	176	170	165	179	173	167	162	166	161	157	159	155	152	153	150	148	144
2	168	156	146	137	164	153	143	135	147	139	132	142	135	129	137	131	127	123
3	154	138	126	116	151	136	124	115	131	121	113	126	118	111	122	115	109	106
4	142	124	110	100	138	121	109	99	117	106	98	114	104	96	110	102	95	92
5	131	111	97	87	128	109	96	86	106	94	85	103	92	84	100	91	84	80
6	122	101	87	76	119	99	86	76	96	84	75	93	83	75	91	81	74	71
7	113	92	78	68	110	90	77	68	88	76	67	85	75	67	83	74	66	63
8	105	84	70	61	103	83	70	61	81	69	60	79	68	60	77	67	60	57
9	99	77	64	55	96	76	64	55	74	63	55	73	62	55	71	61	54	51
10	93	71	59	50	91	71	58	50	69	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

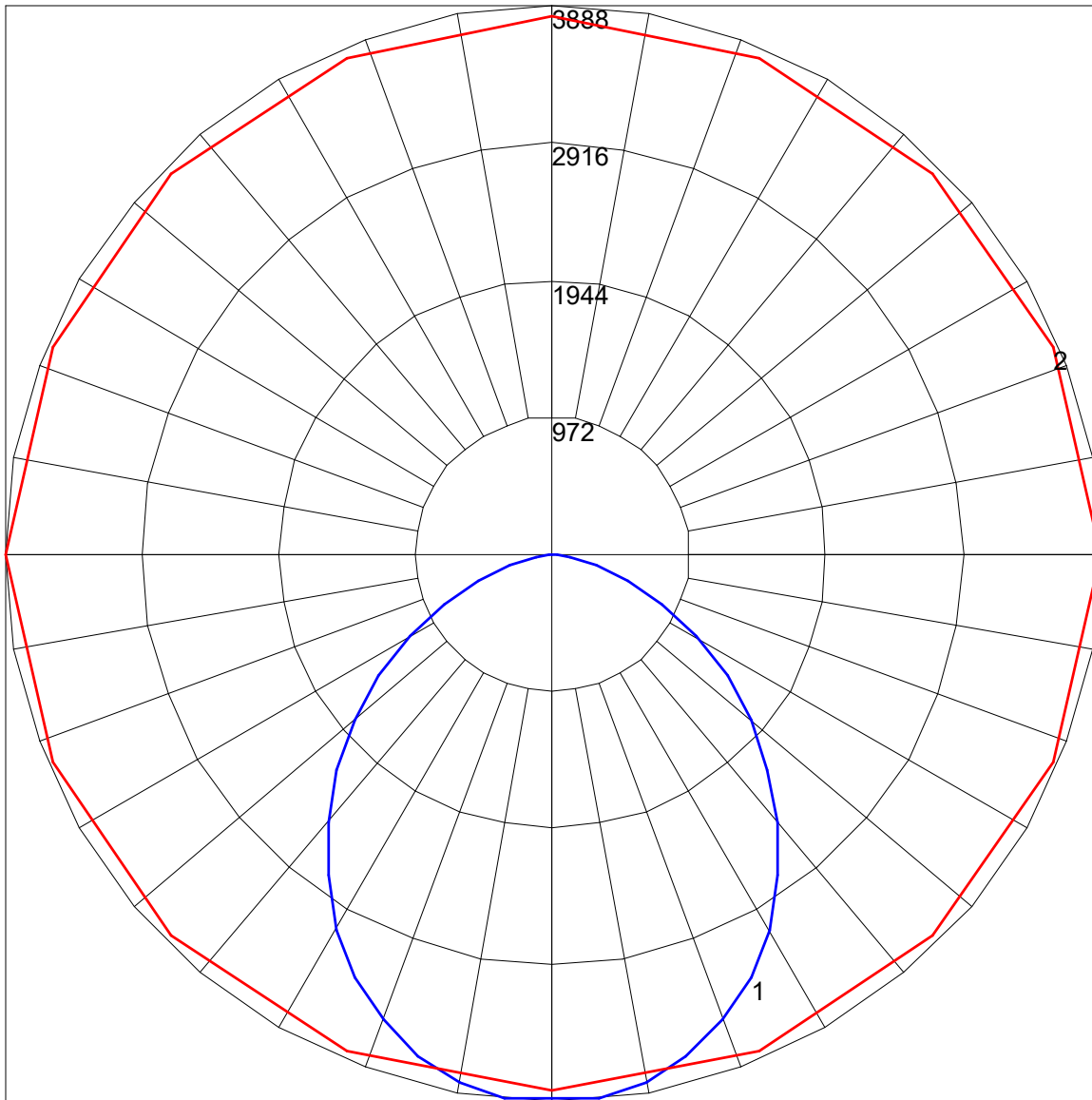
X=2H	Y=2H	15.5	17.1	15.9	17.4	17.7	15.5	17.0	15.9	17.4	17.7
	3H	16.7	18.1	17.1	18.4	18.8	16.7	18.1	17.1	18.4	18.8
	4H	17.0	18.3	17.4	18.7	19.0	17.0	18.3	17.4	18.6	19.0
	6H	17.1	18.3	17.5	18.7	19.1	17.1	18.3	17.5	18.7	19.1
	8H	17.1	18.3	17.6	18.7	19.1	17.1	18.3	17.6	18.7	19.1
	12H	17.1	18.2	17.6	18.6	19.0	17.1	18.2	17.6	18.6	19.0

### UGR Viewed Endwise

4H	2H	16.0	17.3	16.4	17.6	18.0	16.0	17.3	16.4	17.6	18.0
	3H	17.3	18.4	17.7	18.8	19.2	17.3	18.4	17.7	18.8	19.2
	4H	17.7	18.7	18.1	19.1	19.5	17.7	18.7	18.1	19.1	19.5
	6H	17.9	18.7	18.3	19.2	19.6	17.9	18.7	18.3	19.2	19.6
	8H	17.9	18.7	18.4	19.1	19.6	17.9	18.7	18.4	19.1	19.6
	12H	17.9	18.6	18.3	19.1	19.5	17.9	18.6	18.4	19.1	19.5
8H	4H	17.8	18.6	18.3	19.1	19.5	17.8	18.6	18.3	19.0	19.5
	6H	18.0	18.7	18.5	19.2	19.6	18.0	18.7	18.5	19.2	19.6
	8H	18.1	18.6	18.6	19.1	19.6	18.1	18.6	18.6	19.1	19.6
	12H	18.0	18.6	18.6	19.1	19.6	18.1	18.6	18.6	19.1	19.6
12H	4H	17.8	18.5	18.3	19.0	19.5	17.8	18.5	18.3	19.0	19.4
	6H	18.0	18.6	18.5	19.1	19.6	18.0	18.6	18.5	19.1	19.6
	8H	18.0	18.6	18.6	19.1	19.6	18.1	18.6	18.6	19.1	19.6

Maximum UGR = 19.6

POLAR GRAPH



Maximum Candela = 3888.291 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.)