



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-24-L60-AMB-L134-835-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-L12/AMBER-L134/835-SAF125-DIM-UNV AMBER ONLY

### CHARACTERISTICS

Lumens Per Lamp	5339 (1 lamp)
Total Lamp Lumens	5339
Luminaire Lumens	5259
Total Luminaire Efficiency	99 %
Luminaire Efficacy Rating (LER)	59
Total Luminaire Watts	89.4
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	3503	3465	3500
55	3006	2960	2983
65	2312	2303	2317
75	1381	1418	1381
85	327	327	305

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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>	2285.922	2285.922	2285.922	2285.922	2285.922
<b>5</b>	2300.689	2278.047	2263.280	2258.357	2260.326
<b>10</b>	2256.388	2231.777	2220.948	2217.010	2219.963
<b>15</b>	2182.554	2165.818	2153.020	2148.098	2153.020
<b>20</b>	2084.107	2066.387	2055.558	2058.511	2066.387
<b>25</b>	1967.941	1949.236	1938.407	1942.345	1947.267
<b>30</b>	1828.147	1805.505	1798.613	1805.505	1809.442
<b>35</b>	1650.944	1640.115	1633.224	1639.130	1646.022
<b>40</b>	1473.741	1463.896	1456.020	1461.927	1466.849
<b>45</b>	1282.755	1274.879	1268.972	1276.848	1281.770
<b>50</b>	1086.847	1076.018	1077.987	1077.987	1090.785
<b>55</b>	892.908	879.125	879.125	882.079	886.016
<b>60</b>	698.969	692.077	690.108	690.108	690.108
<b>65</b>	506.014	507.983	504.045	501.092	506.998
<b>70</b>	337.671	331.764	340.624	335.702	334.717
<b>75</b>	185.079	190.986	190.001	187.048	185.079
<b>80</b>	72.850	74.819	77.773	77.773	79.741
<b>85</b>	14.767	15.751	14.767	13.782	13.782
<b>90</b>	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : MCTG-24-L60-AMB-L134-835-SAF125 AMBER ONLY\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	823.49	15.40	15.70
0-30	1719.23	32.20	32.70
0-40	2744.63	51.40	52.20
0-60	4518.4	84.60	85.90
0-80	5230.19	98.00	99.50
0-90	5259.01	98.50	100.00
10-90	5043.67	94.50	95.90
20-40	1921.14	36.00	36.50
20-50	2904.3	54.40	55.20
40-70	2277.61	42.70	43.30
60-80	711.79	13.30	13.50
70-80	207.95	3.90	4.00
80-90	28.82	0.50	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	5259.01	98.50	100.00

Total Luminaire Efficiency = 98.50%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	215.34
10-20	608.16
20-30	895.73
30-40	1025.4
40-50	983.16
50-60	790.61
60-70	503.84
70-80	207.95
80-90	28.82
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	117	117	117	117	115	115	115	115	109	109	109	105	105	105	101	101	101	99
1	108	104	101	97	106	102	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	86	81	97	90	85	80	87	82	78	84	80	77	81	78	75	73
3	91	82	74	69	89	80	74	68	77	72	67	75	70	66	72	68	65	63
4	84	73	65	59	82	72	64	59	69	63	58	67	62	57	65	60	56	54
5	78	66	57	51	76	65	57	51	63	56	51	61	55	50	59	54	49	47
6	72	60	51	45	70	59	51	45	57	50	45	55	49	44	54	48	44	42
7	67	54	46	40	65	53	46	40	52	45	40	51	44	40	49	44	39	37
8	62	50	42	36	61	49	41	36	48	41	36	46	40	36	45	40	35	34
9	58	46	38	33	57	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	42	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28

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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

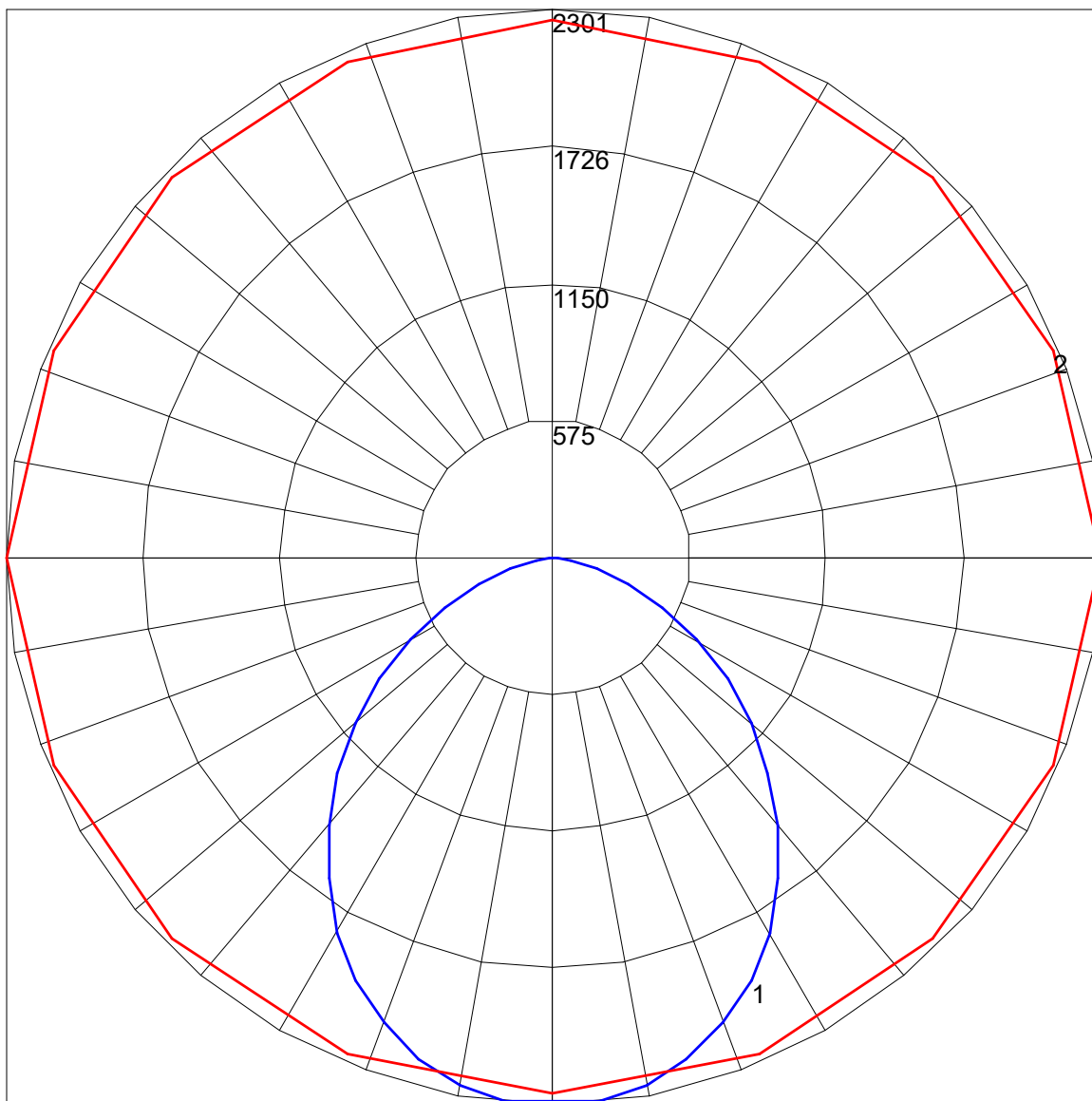
4H	2H	16.0	17.3	16.4	17.6	18.0	16.0	17.3	16.4	17.6	18.0
	3H	17.3	18.4	17.7	18.8	19.2	17.3	18.4	17.7	18.8	19.2
	4H	17.7	18.7	18.1	19.1	19.5	17.7	18.7	18.1	19.1	19.5
	6H	17.9	18.7	18.3	19.2	19.6	17.9	18.7	18.3	19.2	19.6
	8H	17.9	18.7	18.4	19.1	19.6	17.9	18.7	18.4	19.1	19.6
	12H	17.9	18.6	18.3	19.1	19.5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

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## POLAR GRAPH



Maximum Candela = 2300.689 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.)