



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-24-L28-RED-L74-835-SAF125 RED 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 RED 22" ARRAY 2X4'RECESSED TROFFER

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

[LUMCAT] MCTG-24-L28/RED-L74/835-SAF125-DIM-UNV RED ONLY

### CHARACTERISTICS

Lumens Per Lamp	5339 (1 lamp)
Total Lamp Lumens	5339
Luminaire Lumens	2462
Total Luminaire Efficiency	46 %
Luminaire Efficacy Rating (LER)	42
Total Luminaire Watts	59
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	1640	1623	1639
55	1408	1386	1397
65	1083	1078	1085
75	647	664	647
85	153	153	143

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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>	1070.321	1070.321	1070.321	1070.321	1070.321
<b>5</b>	1077.235	1066.633	1059.719	1057.414	1058.336
<b>10</b>	1056.492	1044.968	1039.898	1038.054	1039.437
<b>15</b>	1021.921	1014.085	1008.093	1005.788	1008.093
<b>20</b>	975.826	967.529	962.459	963.842	967.529
<b>25</b>	921.434	912.676	907.606	909.450	911.755
<b>30</b>	855.980	845.378	842.151	845.378	847.222
<b>35</b>	773.009	767.939	764.712	767.478	770.705
<b>40</b>	690.039	685.429	681.742	684.507	686.812
<b>45</b>	600.615	596.927	594.162	597.849	600.154
<b>50</b>	508.886	503.816	504.738	504.738	510.730
<b>55</b>	418.080	411.626	411.626	413.009	414.853
<b>60</b>	327.273	324.046	323.124	323.124	323.124
<b>65</b>	236.927	237.849	236.005	234.622	237.388
<b>70</b>	158.105	155.339	159.488	157.183	156.722
<b>75</b>	86.658	89.424	88.963	87.580	86.658
<b>80</b>	34.110	35.032	36.415	36.415	37.337
<b>85</b>	6.914	7.375	6.914	6.453	6.453
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	385.58	7.20	15.70
0-30	804.98	15.10	32.70
0-40	1285.1	24.10	52.20
0-60	2115.62	39.60	85.90
0-80	2448.89	45.90	99.50
0-90	2462.39	46.10	100.00
10-90	2361.56	44.20	95.90
20-40	899.52	16.80	36.50
20-50	1359.86	25.50	55.20
40-70	1066.43	20.00	43.30
60-80	333.28	6.20	13.50
70-80	97.37	1.80	4.00
80-90	13.49	0.30	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	2462.39	46.10	100.00

Total Luminaire Efficiency = 46.10%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	100.83
10-20	284.75
20-30	419.40
30-40	480.12
40-50	460.34
50-60	370.18
60-70	235.91
70-80	97.37
80-90	13.49
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	55	55	55	55	54	54	54	54	51	51	51	49	49	49	47	47	47	46
1	51	49	47	46	50	48	46	45	46	45	43	44	43	42	42	42	41	40
2	47	43	40	38	45	42	40	38	41	39	37	39	37	36	38	36	35	34
3	43	38	35	32	42	38	34	32	36	34	31	35	33	31	34	32	30	29
4	39	34	30	28	38	34	30	27	33	29	27	31	29	27	30	28	26	25
5	36	31	27	24	35	30	27	24	29	26	24	28	26	23	28	25	23	22
6	34	28	24	21	33	27	24	21	27	23	21	26	23	21	25	23	21	20
7	31	25	22	19	31	25	21	19	24	21	19	24	21	19	23	20	18	17
8	29	23	19	17	29	23	19	17	22	19	17	22	19	17	21	19	17	16
9	27	21	18	15	27	21	18	15	21	17	15	20	17	15	20	17	15	14
10	26	20	16	14	25	20	16	14	19	16	14	19	16	14	18	16	14	13

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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

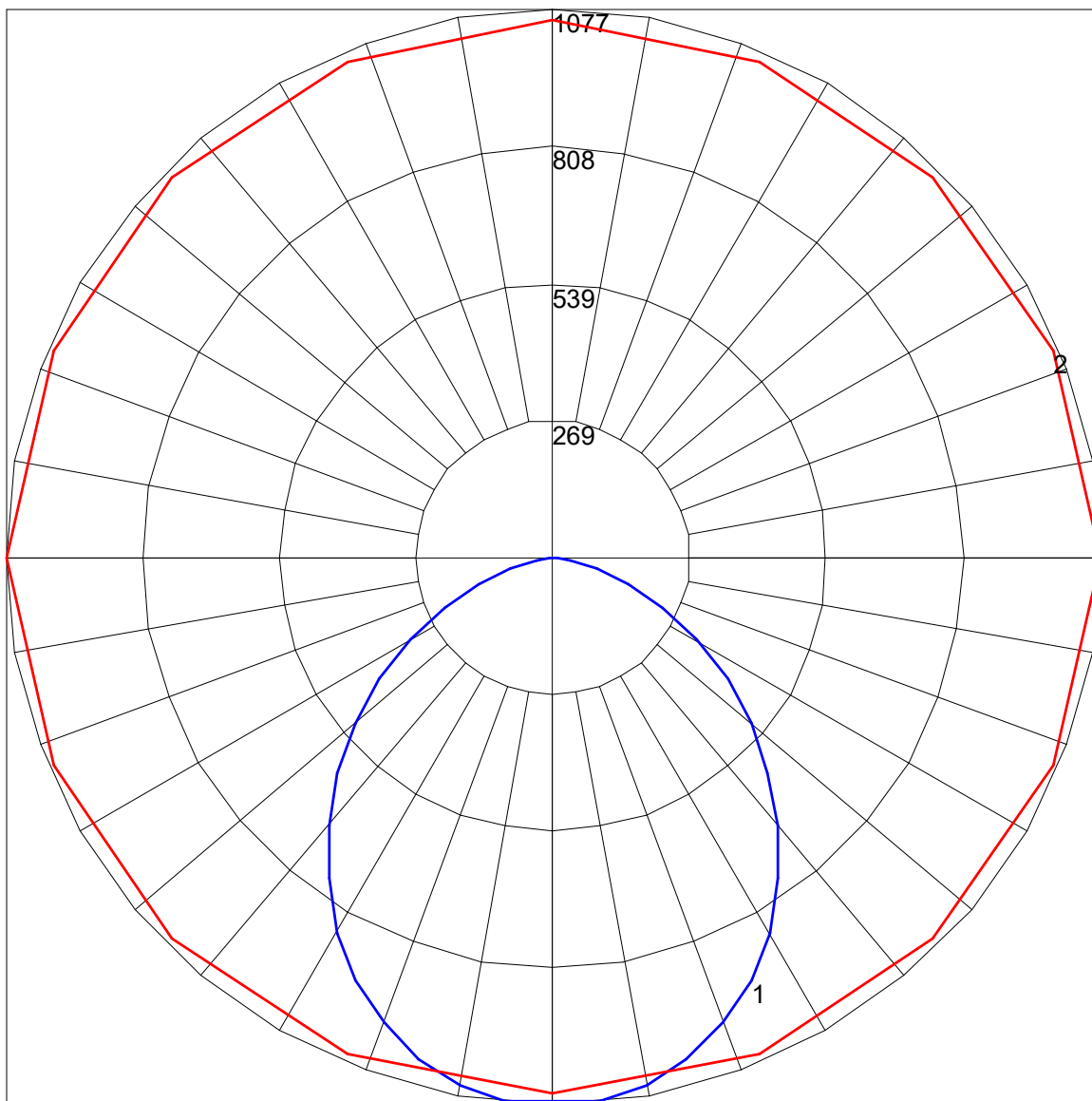
X=2H	Y=2H	10.5	12.1	10.9	12.4	12.7	10.5	12.1	10.9	12.4	12.7
	3H	11.8	13.1	12.1	13.4	13.8	11.8	13.1	12.1	13.4	13.8
	4H	12.0	13.3	12.4	13.7	14.0	12.0	13.3	12.4	13.7	14.0
	6H	12.1	13.3	12.6	13.7	14.1	12.1	13.3	12.6	13.7	14.1
	8H	12.2	13.3	12.6	13.7	14.1	12.2	13.3	12.6	13.7	14.1
	12H	12.2	13.2	12.6	13.6	14.0	12.2	13.2	12.6	13.6	14.0

### UGR Viewed Endwise

4H	2H	10.9	12.3	11.3	12.6	13.0	10.9	12.3	11.3	12.6	13.0
	3H	12.4	13.4	12.8	13.8	14.2	12.4	13.4	12.8	13.8	14.2
	4H	12.8	13.7	13.2	14.1	14.5	12.7	13.7	13.2	14.1	14.5
	6H	12.9	13.7	13.4	14.2	14.6	12.9	13.7	13.4	14.2	14.6
	8H	12.9	13.7	13.4	14.1	14.6	12.9	13.7	13.4	14.1	14.6
	12H	12.9	13.6	13.4	14.1	14.5	13.0	13.6	13.4	14.1	14.6
8H	4H	12.8	13.6	13.3	14.1	14.5	12.8	13.6	13.3	14.1	14.5
	6H	13.0	13.7	13.5	14.2	14.7	13.0	13.7	13.5	14.2	14.7
	8H	13.1	13.7	13.6	14.2	14.7	13.1	13.7	13.6	14.2	14.7
	12H	13.1	13.6	13.6	14.1	14.6	13.1	13.6	13.6	14.1	14.6
12H	4H	12.9	13.5	13.4	14.0	14.5	12.9	13.5	13.4	14.0	14.5
	6H	13.1	13.6	13.6	14.1	14.6	13.1	13.6	13.6	14.1	14.6
	8H	13.1	13.6	13.6	14.1	14.6	13.1	13.6	13.6	14.1	14.6

Maximum UGR = 14.7

POLAR GRAPH



Maximum Candela = 1077.235 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.)