



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MSTG-24-L210-840-CS-SSYM-ASY-DIM-120\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 20165.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 18-FEB-2020

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

[LUMINAIRE] 6-42 LED 22" ARRAYS 2x4' RECESSED ASYMMETRIC LUMINAIRE

[MORE] WHITE ASYMMETRIC REFL w/AF12125 LENS IN DOOR

[LUMCAT] MSTG-24-L210-840-CS-SSYM-ASY-DIM-120

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	20541
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	166.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.38
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.24
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.57 ft
Luminous Width (90-270)	3.57 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	19600	17855	13792
55	16175	14710	11225
65	12416	11488	8927
75	8139	7337	5985
85	4212	3815	2955

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
<b>0</b>	9332.810	9332.810	9332.810	9332.810	9332.810	9332.810	9332.810	9332.810	9332.810
<b>5</b>	9489.512	9437.278	9323.769	9180.126	9040.500	8936.032	8801.429	8710.020	8670.844
<b>10</b>	9645.209	9566.858	9389.062	9140.950	8840.605	8557.336	8292.148	8109.329	8034.996
<b>15</b>	9854.145	9767.758	9545.764	9219.301	8823.528	8400.634	8044.036	7791.907	7700.497
<b>20</b>	9489.512	9332.810	8984.248	8465.926	7848.159	7165.099	6590.525	6202.788	6081.243
<b>25</b>	9241.400	9101.775	8736.137	8196.720	7547.813	6816.537	6215.846	5828.109	5710.583
<b>30</b>	9105.793	8922.974	8514.142	7887.334	7143.000	6277.121	5598.079	5184.225	5057.658
<b>35</b>	8096.270	7922.492	7517.678	6877.812	6128.455	5279.652	4631.750	4257.071	4152.603
<b>40</b>	7691.457	7508.638	7081.725	6407.706	5611.137	4678.961	4035.077	3704.596	3630.263
<b>45</b>	7243.450	7051.590	6598.561	5915.501	5096.833	4113.428	3508.719	3221.432	3173.216
<b>50</b>	6133.477	5989.834	5579.998	5014.464	4292.229	3425.345	2938.163	2694.069	2667.952
<b>55</b>	4848.722	4718.137	4409.755	3947.685	3365.075	2654.894	2263.139	2093.378	2085.342
<b>60</b>	3730.713	3630.263	3430.368	3064.730	2637.817	2072.284	1789.015	1680.529	1680.529
<b>65</b>	2742.285	2690.051	2537.367	2276.197	1971.834	1540.903	1327.949	1279.733	1283.751
<b>70</b>	1850.289	1811.114	1697.605	1518.804	1345.026	1053.721	923.136	910.077	923.136
<b>75</b>	1100.932	1074.815	992.446	897.019	809.627	626.808	565.534	574.574	591.651
<b>80</b>	570.556	565.534	500.241	466.088	413.854	304.364	287.287	296.328	313.404
<b>85</b>	191.860	191.860	173.779	147.662	134.603	91.410	91.410	108.486	108.486
<b>90</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	3274.27	N.A.	15.90
0-30	6720.9	N.A.	32.70
0-40	10608.52	N.A.	51.60
0-60	17530.44	N.A.	85.30
0-80	20355.68	N.A.	99.10
0-90	20541.23	N.A.	100.00
10-90	19680.76	N.A.	95.80
20-40	7334.25	N.A.	35.70
20-50	11206.49	N.A.	54.60
40-70	8867.44	N.A.	43.20
60-80	2825.24	N.A.	13.80
70-80	879.72	N.A.	4.30
80-90	185.55	N.A.	0.90
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	20541.23	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	860.47
10-20	2413.8
20-30	3446.63
30-40	3887.62
40-50	3872.23
50-60	3049.68
60-70	1945.53
70-80	879.72
80-90	185.55
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	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74
3	93	83	75	69	90	81	74	69	78	72	68	76	71	66	73	69	65	63
4	85	74	66	60	83	73	65	59	70	64	58	68	62	58	66	61	57	55
5	79	67	58	52	77	65	58	52	63	56	51	61	55	51	60	54	50	48
6	73	60	52	46	71	59	51	46	58	50	45	56	50	45	54	49	44	42
7	68	55	47	41	66	54	46	41	53	45	40	51	45	40	50	44	40	38
8	63	50	42	37	62	50	42	36	48	41	36	47	41	36	46	40	36	34
9	59	46	38	33	58	46	38	33	45	38	33	44	37	33	43	37	33	31
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	40	34	30	28

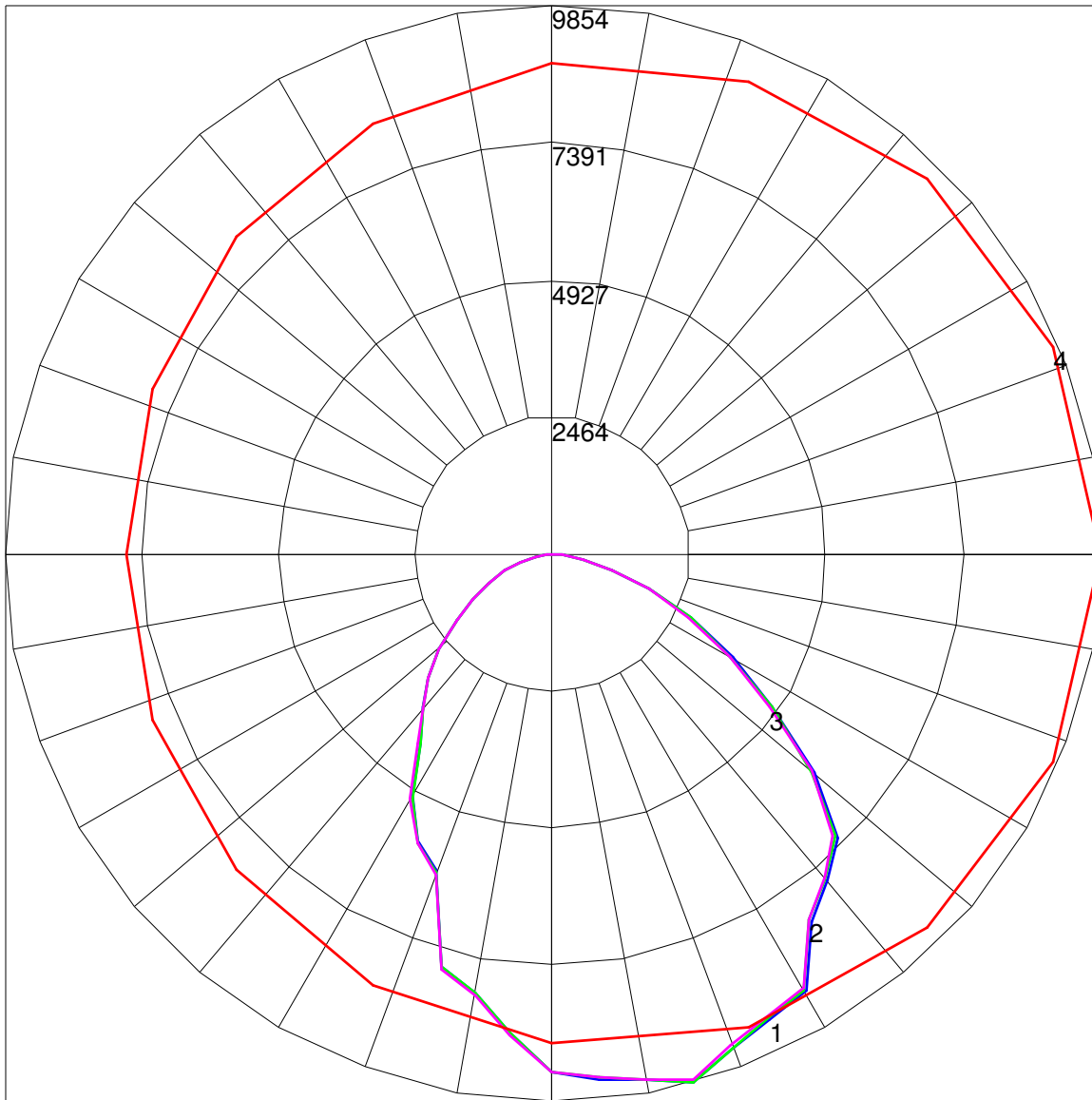
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**UGR TABLE - CORRECTED**

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					UGR Viewed Endwise				
X=2H	Y=2H	22.4	23.9	22.8	24.3	24.6	20.0	21.6	20.4	21.9	22.2
	3H	23.6	25.0	24.0	25.4	25.7	21.3	22.7	21.7	23.0	23.4
	4H	24.0	25.3	24.4	25.6	26.0	21.7	23.0	22.1	23.3	23.7
	6H	24.2	25.4	24.6	25.8	26.2	21.9	23.1	22.3	23.4	23.8
	8H	24.2	25.4	24.7	25.8	26.2	21.9	23.1	22.3	23.5	23.9
	12H	24.3	25.4	24.7	25.7	26.2	21.9	23.0	22.4	23.4	23.8
4H	2H	22.8	24.1	23.2	24.4	24.8	20.6	21.9	21.0	22.2	22.6
	3H	24.2	25.3	24.6	25.7	26.1	22.0	23.1	22.4	23.5	23.9
	4H	24.7	25.6	25.1	26.0	26.5	22.4	23.4	22.9	23.8	24.3
	6H	24.9	25.8	25.4	26.2	26.7	22.7	23.6	23.2	24.0	24.5
	8H	25.0	25.8	25.5	26.3	26.7	22.8	23.6	23.2	24.0	24.5
	12H	25.1	25.8	25.5	26.2	26.7	22.8	23.5	23.3	24.0	24.5
8H	4H	24.8	25.5	25.2	26.0	26.5	22.6	23.4	23.1	23.8	24.3
	6H	25.1	25.8	25.6	26.3	26.7	23.0	23.6	23.5	24.1	24.6
	8H	25.2	25.8	25.8	26.3	26.8	23.1	23.6	23.6	24.1	24.6
	12H	25.3	25.8	25.8	26.3	26.9	23.1	23.6	23.6	24.1	24.7
12H	4H	24.7	25.4	25.2	25.9	26.4	22.6	23.3	23.1	23.8	24.2
	6H	25.1	25.7	25.7	26.2	26.7	23.0	23.5	23.5	24.0	24.5
	8H	25.3	25.8	25.8	26.3	26.8	23.1	23.6	23.6	24.1	24.7

Maximum UGR = 26.9

POLAR GRAPH



Maximum Candela = 9854.145 Located At Horizontal Angle = 0, Vertical Angle = 15  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Vertical Plane Through Horizontal Angles (5 - 185)  
# 3 - Vertical Plane Through Horizontal Angles (10 - 190)  
# 4 - Horizontal Cone Through Vertical Angle (15) (Through Max. Cd.)