



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : MSTG-22-L14-GRN-L57-840-CS-SSYM-ASY-DIM-120-WHITE ONLY\_.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] 3-42 LED 22" ARRAYS 2x2' RECESSED ASYMMETRIC LUMINAIRE

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

[LUMCAT] MSTG-22-L14-GRN-L57-840-SSYM-ASY-DIM-120 WHITE ONLY

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5524
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	48.3
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)	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	11973	10907	8425
55	9880	8986	6857
65	7584	7017	5453
75	4972	4482	3656
85	2573	2330	1805

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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>	2509.828	2509.828	2509.828	2509.828	2509.828	2509.828	2509.828	2509.828	2509.828
<b>5</b>	2551.969	2537.922	2507.397	2468.767	2431.219	2403.125	2366.926	2342.344	2331.809
<b>10</b>	2593.840	2572.770	2524.956	2458.232	2377.462	2301.283	2229.968	2180.803	2160.813
<b>15</b>	2650.028	2626.797	2567.097	2479.303	2372.869	2259.142	2163.244	2095.440	2070.858
<b>20</b>	2551.969	2509.828	2416.091	2276.701	2110.568	1926.876	1772.358	1668.086	1635.400
<b>25</b>	2485.246	2447.697	2349.368	2204.305	2029.797	1833.139	1671.598	1567.326	1535.720
<b>30</b>	2448.777	2399.613	2289.668	2121.103	1920.933	1688.076	1505.465	1394.169	1360.132
<b>35</b>	2177.291	2130.558	2021.693	1849.617	1648.096	1419.832	1245.594	1144.834	1116.740
<b>40</b>	2068.427	2019.262	1904.455	1723.194	1508.976	1258.291	1085.134	996.259	976.269
<b>45</b>	1947.946	1896.351	1774.519	1590.827	1370.667	1106.204	943.583	866.324	853.358
<b>50</b>	1649.447	1610.817	1500.602	1348.516	1154.289	921.162	790.146	724.503	717.480
<b>55</b>	1303.944	1268.826	1185.894	1061.632	904.954	713.968	608.615	562.962	560.801
<b>60</b>	1003.283	976.269	922.512	824.183	709.376	557.289	481.111	451.937	451.937
<b>65</b>	737.470	723.423	682.362	612.127	530.276	414.388	357.119	344.153	345.233
<b>70</b>	497.589	487.054	456.529	408.445	361.711	283.372	248.254	244.743	248.254
<b>75</b>	296.068	289.045	266.894	241.231	217.729	168.564	152.086	154.517	159.110
<b>80</b>	153.437	152.086	134.527	125.343	111.296	81.851	77.259	79.690	84.282
<b>85</b>	51.596	51.596	46.733	39.710	36.198	24.582	24.582	29.175	29.175
<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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Zone	Lumens	%Lamp	%Fixt
0-20	880.53	N.A.	15.90
0-30	1807.42	N.A.	32.70
0-40	2852.9	N.A.	51.60
0-60	4714.38	N.A.	85.30
0-80	5474.16	N.A.	99.10
0-90	5524.05	N.A.	100.00
10-90	5292.65	N.A.	95.80
20-40	1972.37	N.A.	35.70
20-50	3013.71	N.A.	54.60
40-70	2384.68	N.A.	43.20
60-80	759.78	N.A.	13.80
70-80	236.58	N.A.	4.30
80-90	49.90	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	5524.05	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	231.40
10-20	649.13
20-30	926.89
30-40	1045.48
40-50	1041.34
50-60	820.14
60-70	523.20
70-80	236.58
80-90	49.90
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

X=2H	Y=2H	20.6	22.2	21.0	22.5	22.8	18.3	19.8	18.6	20.1	20.5
	3H	21.9	23.3	22.3	23.6	24.0	19.6	20.9	19.9	21.3	21.6
	4H	22.2	23.5	22.6	23.9	24.3	19.9	21.2	20.3	21.6	21.9
	6H	22.5	23.7	22.9	24.0	24.4	20.1	21.3	20.5	21.7	22.1
	8H	22.5	23.6	22.9	24.0	24.4	20.2	21.3	20.6	21.7	22.1
	12H	22.5	23.6	22.9	24.0	24.4	20.2	21.3	20.6	21.7	22.1

### UGR Viewed Endwise

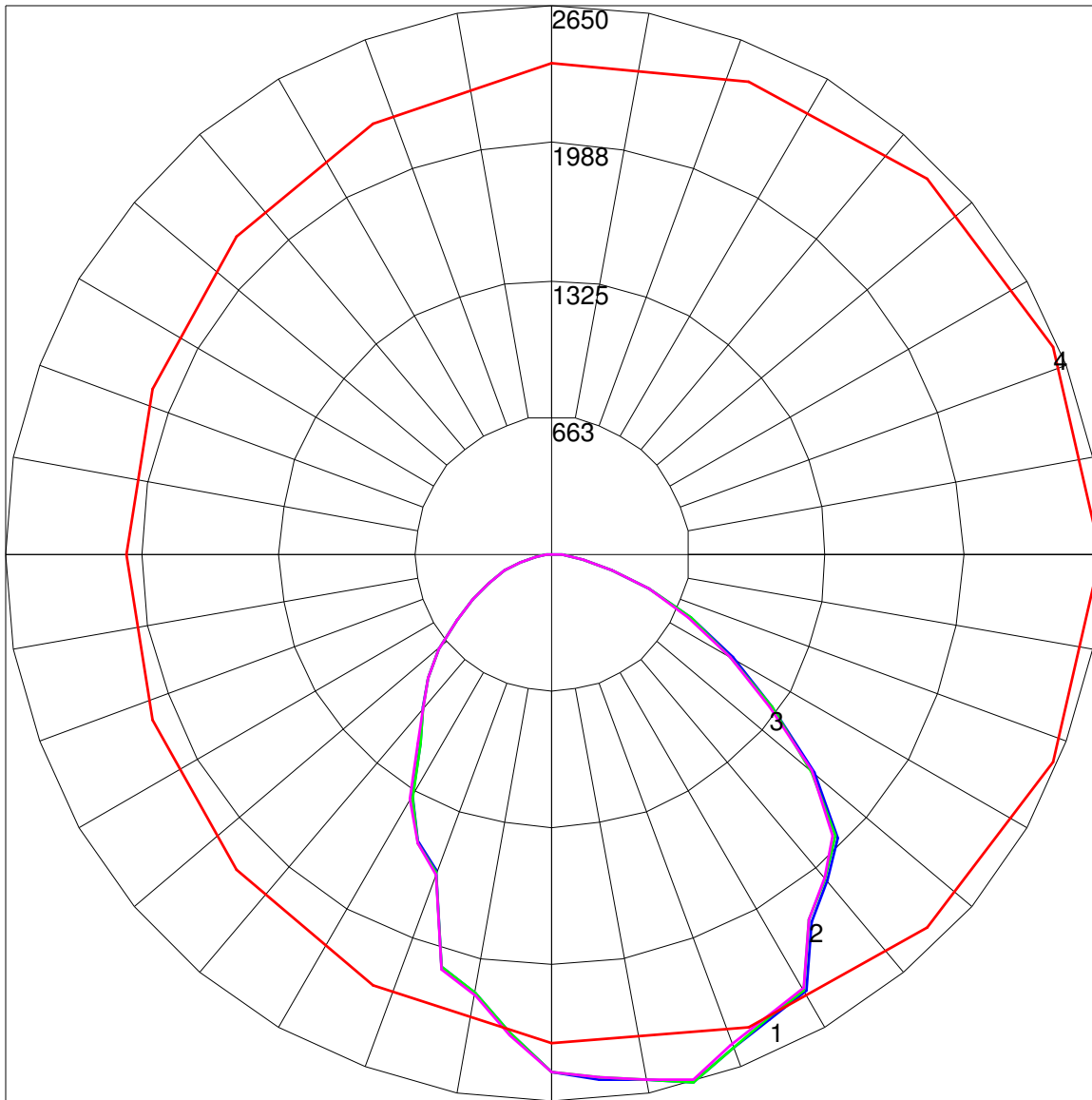
4H	2H	21.0	22.3	21.4	22.7	23.1	18.8	20.1	19.2	20.5	20.8
	3H	22.5	23.5	22.9	23.9	24.3	20.2	21.3	20.7	21.7	22.1
	4H	22.9	23.9	23.3	24.3	24.7	20.7	21.6	21.1	22.1	22.5
	6H	23.2	24.0	23.7	24.5	24.9	21.0	21.8	21.4	22.3	22.7
	8H	23.3	24.1	23.7	24.5	25.0	21.0	21.8	21.5	22.3	22.7
	12H	23.3	24.0	23.8	24.5	25.0	21.1	21.8	21.5	22.2	22.7
8H	4H	23.0	23.8	23.5	24.2	24.7	20.8	21.6	21.3	22.1	22.5
	6H	23.4	24.0	23.9	24.5	25.0	21.2	21.8	21.7	22.3	22.8
	8H	23.5	24.1	24.0	24.6	25.1	21.3	21.9	21.8	22.4	22.9
	12H	23.6	24.1	24.1	24.6	25.1	21.4	21.9	21.9	22.4	22.9
12H	4H	23.0	23.7	23.5	24.2	24.6	20.8	21.5	21.3	22.0	22.5
	6H	23.4	24.0	23.9	24.4	25.0	21.2	21.8	21.7	22.3	22.8
	8H	23.5	24.0	24.0	24.5	25.1	21.3	21.9	21.8	22.3	22.9

Maximum UGR = 25.1

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## POLAR GRAPH



Maximum Candela = 2650.028 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.)