



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MSTG-22-L96-840-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] 3-42 LED 22" ARRAYS 2x2' RECESSED ASYMMETRIC LUMINAIRE

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

[LUMCAT] MSTG-22-L96-840-CS-SSYM-ASY-DIM-120

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	9377
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
Total Luminaire Watts	76.6
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)	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	20324	18514	14301
55	16772	15254	11640
65	12874	11912	9257
75	8439	7608	6206
85	4368	3956	3064

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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>
0	4260.438	4260.438	4260.438	4260.438	4260.438	4260.438	4260.438	4260.438	4260.438
5	4331.973	4308.128	4256.311	4190.738	4126.999	4079.309	4017.862	3976.134	3958.250
10	4403.049	4367.282	4286.117	4172.854	4035.746	3906.433	3785.375	3701.918	3667.985
15	4498.428	4458.993	4357.652	4208.621	4027.951	3834.899	3672.112	3557.014	3515.286
20	4331.973	4260.438	4101.320	3864.705	3582.693	3270.876	3008.582	2831.580	2776.094
25	4218.710	4154.970	3988.056	3741.812	3445.585	3111.757	2837.541	2660.538	2606.887
30	4156.805	4073.348	3886.716	3600.577	3260.787	2865.513	2555.529	2366.604	2308.826
35	3695.957	3616.626	3431.829	3139.729	2797.646	2410.167	2114.399	1943.358	1895.668
40	3511.159	3427.702	3232.816	2925.125	2561.490	2135.951	1842.017	1691.152	1657.219
45	3306.643	3219.059	3012.250	2700.433	2326.710	1877.784	1601.734	1470.587	1448.577
50	2799.939	2734.366	2547.275	2289.109	1959.407	1563.674	1341.275	1229.846	1217.923
55	2213.447	2153.835	2013.058	1802.123	1536.161	1211.962	1033.125	955.629	951.961
60	1703.075	1657.219	1565.967	1399.053	1204.166	946.000	816.687	767.163	767.163
65	1251.856	1228.011	1158.311	1039.087	900.144	703.424	606.210	584.200	586.034
70	844.659	826.775	774.959	693.336	614.006	481.025	421.412	415.451	421.412
75	502.577	490.654	453.053	409.490	369.596	286.139	258.167	262.294	270.089
80	260.459	258.167	228.361	212.770	188.925	138.942	131.147	135.274	143.069
85	87.584	87.584	79.330	67.408	61.446	41.729	41.729	49.524	49.524
90	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	1494.71	N.A.	15.90
0-30	3068.1	N.A.	32.70
0-40	4842.8	N.A.	51.60
0-60	8002.66	N.A.	85.30
0-80	9292.39	N.A.	99.10
0-90	9377.09	N.A.	100.00
10-90	8984.29	N.A.	95.80
20-40	3348.09	N.A.	35.70
20-50	5115.77	N.A.	54.60
40-70	4048.00	N.A.	43.20
60-80	1289.73	N.A.	13.80
70-80	401.59	N.A.	4.30
80-90	84.70	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	9377.09	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	392.80
10-20	1101.9
20-30	1573.39
30-40	1774.7
40-50	1767.68
50-60	1392.18
60-70	888.13
70-80	401.59
80-90	84.70
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	22.5	24.1	22.9	24.4	24.7	UGR Viewed Endwise			
	3H	23.8	25.2	24.2	25.5	25.9	20.2	21.7	20.5	22.0
	4H	24.1	25.4	24.5	25.8	26.2	21.5	22.8	21.8	23.2
	6H	24.4	25.6	24.8	25.9	26.3	21.8	23.1	22.2	23.5
	8H	24.4	25.5	24.8	25.9	26.3	22.0	23.2	22.4	23.6
	12H	24.4	25.5	24.8	25.9	26.3	22.1	23.2	22.5	23.6

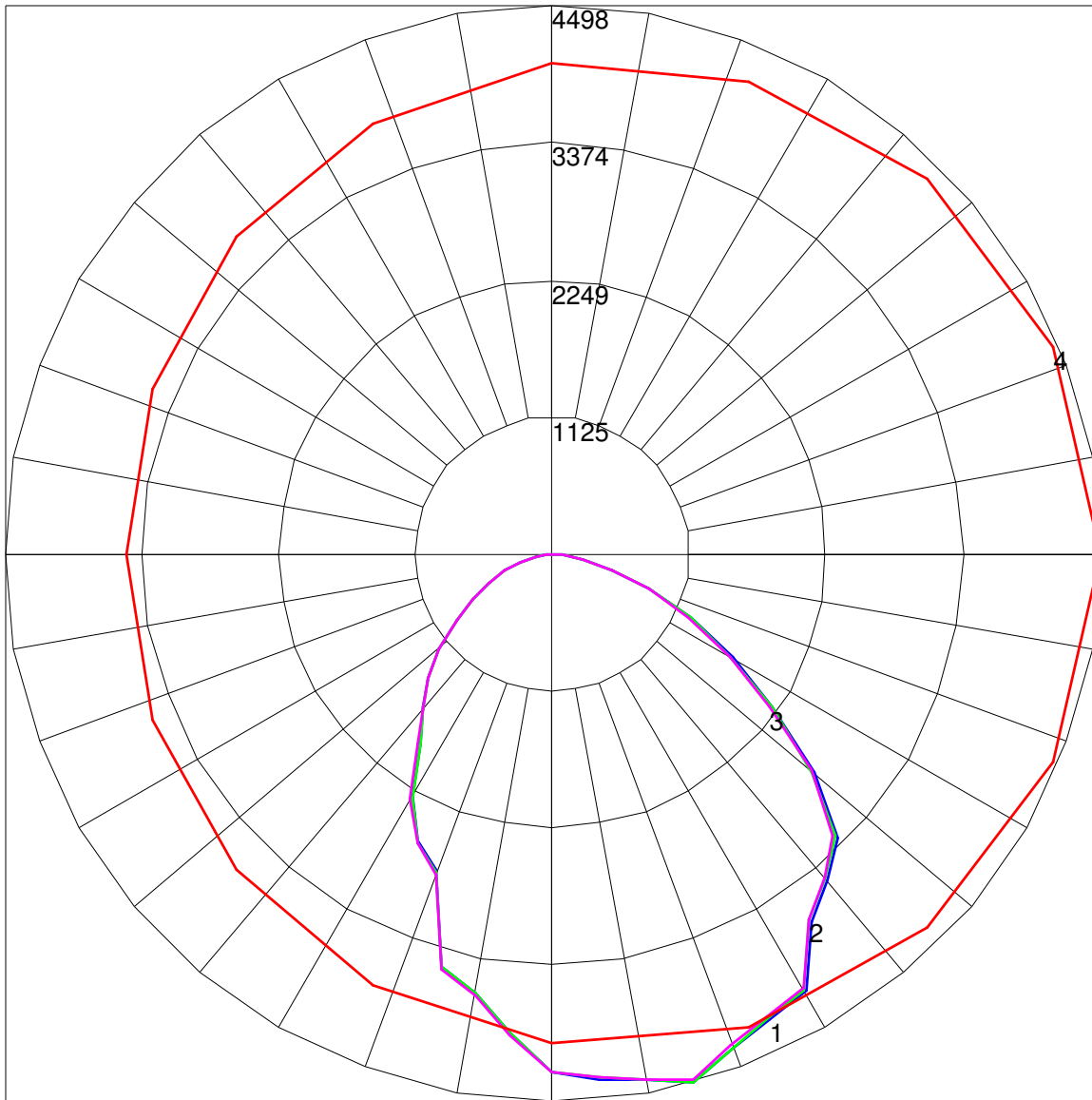
4H	2H	22.9	24.2	23.3	24.6	25.0	20.7	22.0	21.1	22.4
	3H	24.4	25.4	24.8	25.8	26.2	22.1	23.2	22.6	23.6
	4H	24.8	25.8	25.2	26.2	26.6	22.6	23.5	23.0	24.0
	6H	25.1	25.9	25.6	26.4	26.8	22.9	23.7	23.3	24.2
	8H	25.2	26.0	25.6	26.4	26.9	22.9	23.7	23.4	24.2
	12H	25.2	25.9	25.7	26.4	26.9	23.0	23.7	23.4	24.1

8H	4H	24.9	25.7	25.4	26.1	26.6	22.7	23.5	23.2	24.0
	6H	25.3	25.9	25.8	26.4	26.9	23.1	23.7	23.6	24.2
	8H	25.4	26.0	25.9	26.5	27.0	23.2	23.8	23.7	24.3
	12H	25.5	26.0	26.0	26.5	27.0	23.3	23.8	23.8	24.3

12H	4H	24.9	25.6	25.4	26.1	26.5	22.7	23.4	23.2	23.9
	6H	25.3	25.9	25.8	26.3	26.9	23.1	23.7	23.6	24.2
	8H	25.4	25.9	25.9	26.4	27.0	23.2	23.8	23.7	24.2

Maximum UGR = 27.0

POLAR GRAPH



Maximum Candela = 4498.428 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.)