



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-22-L12-RED-L36-850-XX-XAF12125-XXX-XXX_WHITE ONLY.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 19833.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 17-NOV-2023
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2x2' RECESSED WHITE LED LUMINAIRE
 [MORE] PAT12 ACRYLIC LENS w/CLEAR ACRYLIC LENS IN DOOR
 [LUMCAT] MCTG-22-L12-RED-L36-850-xx-xAF12125-xxx-xxx WHITE ONLY
 [LAMPCAT] HLM 80 CRI 5000K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Healthcare, Institutional, Office, Direct, Clean Room
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3897
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	33.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.28
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	5854	5839	5922
55	4658	4568	4590
65	3449	3264	3260
75	2318	1989	2044
85	754	448	733

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	1732.635	1732.635	1732.635	1732.635	1732.635
5	1728.142	1727.734	1726.508	1722.832	1722.832
10	1698.326	1703.227	1702.002	1699.551	1697.509
15	1652.171	1659.115	1658.298	1661.974	1659.115
20	1588.453	1596.622	1595.805	1611.735	1601.523
25	1499.820	1511.257	1520.242	1534.538	1519.017
30	1389.539	1410.370	1420.173	1425.891	1413.638
35	1259.244	1285.793	1290.695	1282.526	1278.033
40	1115.879	1127.724	1128.541	1123.231	1130.992
45	952.500	952.092	950.049	948.416	963.528
50	784.220	772.375	775.234	768.699	781.360
55	614.714	606.136	602.869	606.136	605.728
60	459.912	450.926	450.518	456.645	455.419
65	335.336	329.617	317.364	328.800	316.955
70	225.463	224.646	204.224	222.604	204.632
75	138.055	132.746	118.450	130.703	121.717
80	62.493	61.267	50.648	55.957	59.225
85	15.113	16.338	8.986	11.437	14.704
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	631.74	N.A.	16.20
0-30	1330.05	N.A.	34.10
0-40	2128.82	N.A.	54.60
0-60	3407.88	N.A.	87.50
0-80	3874.23	N.A.	99.40
0-90	3896.81	N.A.	100.00
10-90	3732.9	N.A.	95.80
20-40	1497.07	N.A.	38.40
20-50	2230.76	N.A.	57.20
40-70	1605.81	N.A.	41.20
60-80	466.35	N.A.	12.00
70-80	139.60	N.A.	3.60
80-90	22.58	N.A.	0.60
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	3896.81	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	163.91
10-20	467.83
20-30	698.31
30-40	798.76
40-50	733.68
50-60	545.38
60-70	326.74
70-80	139.60
80-90	22.58
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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	53	78	67	59	53	65	58	53	63	57	52	61	56	51	50
6	74	61	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41	39
8	64	51	43	38	63	51	43	38	49	42	38	48	42	37	47	41	37	35
9	60	47	40	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

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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	16.7	18.2	17.0	18.5	18.8	16.7	18.2	17.1	18.5	18.8
	3H	17.8	19.2	18.2	19.5	19.9	17.8	19.1	18.1	19.4	19.8
	4H	18.2	19.5	18.6	19.8	20.2	18.1	19.3	18.5	19.7	20.1
	6H	18.4	19.5	18.8	19.9	20.3	18.2	19.4	18.6	19.7	20.1
	8H	18.4	19.5	18.8	19.9	20.3	18.2	19.3	18.6	19.7	20.1
	12H	18.4	19.4	18.8	19.8	20.3	18.2	19.3	18.7	19.7	20.1

UGR Viewed Endwise

4H	2H	17.0	18.3	17.4	18.7	19.0	17.1	18.3	17.5	18.7	19.0
	3H	18.4	19.4	18.8	19.8	20.2	18.3	19.4	18.8	19.8	20.2
	4H	18.8	19.8	19.3	20.2	20.6	18.7	19.7	19.1	20.1	20.5
	6H	19.1	19.9	19.5	20.3	20.8	18.9	19.7	19.4	20.2	20.6
	8H	19.1	19.9	19.6	20.3	20.8	19.0	19.7	19.4	20.2	20.6
	12H	19.1	19.8	19.6	20.3	20.7	19.0	19.6	19.5	20.1	20.6

8H	4H	18.9	19.7	19.4	20.1	20.6	18.8	19.6	19.3	20.0	20.5
	6H	19.2	19.8	19.7	20.3	20.8	19.1	19.7	19.6	20.2	20.7
	8H	19.3	19.8	19.8	20.3	20.8	19.1	19.7	19.6	20.2	20.7
	12H	19.3	19.8	19.8	20.3	20.9	19.1	19.6	19.6	20.1	20.7

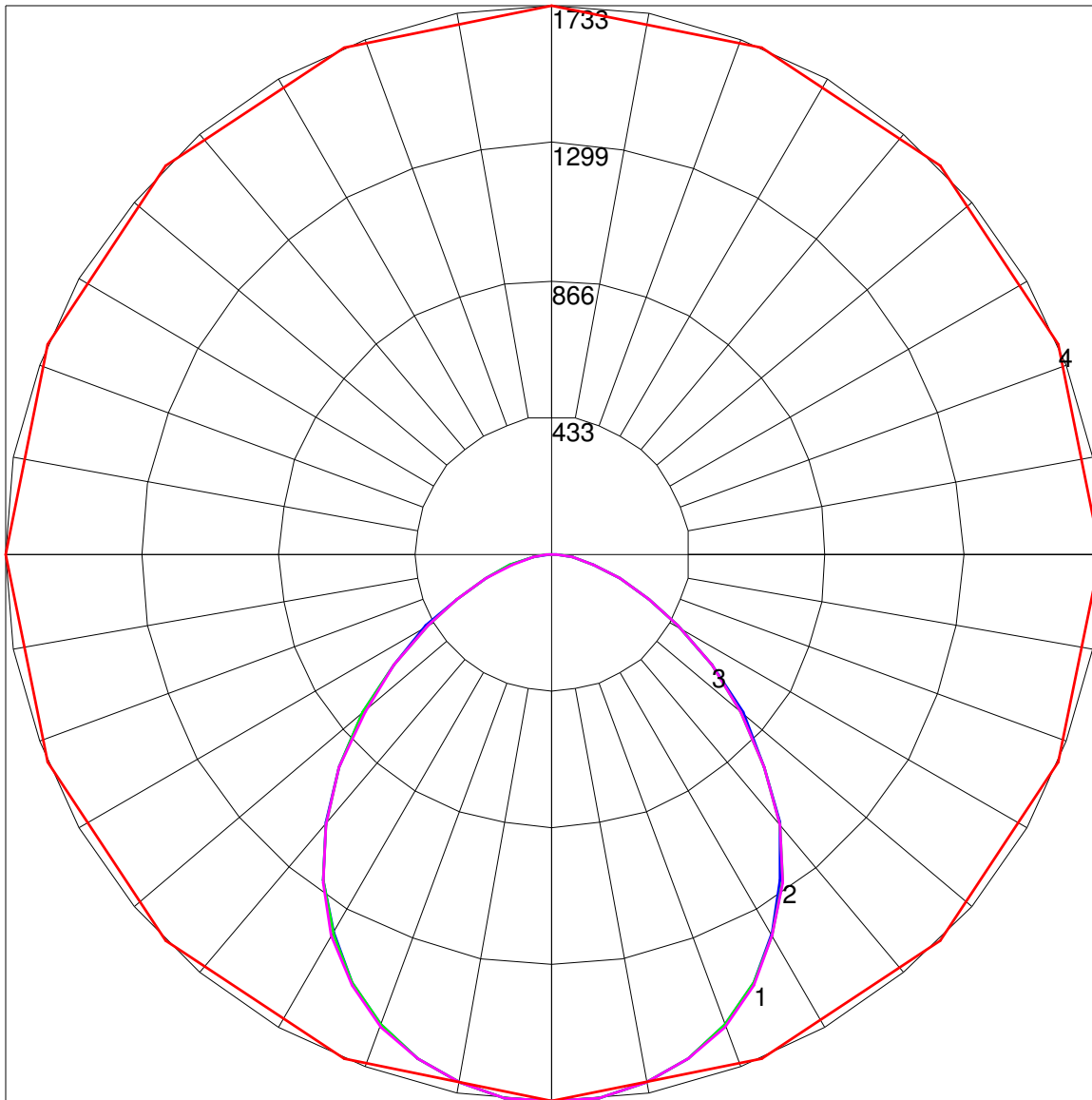
12H	4H	18.9	19.6	19.4	20.1	20.5	18.8	19.5	19.3	20.0	20.4
	6H	19.2	19.8	19.7	20.2	20.8	19.1	19.6	19.6	20.1	20.6
	8H	19.3	19.8	19.8	20.3	20.8	19.1	19.6	19.6	20.1	20.7

Maximum UGR = 20.9

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POLAR GRAPH



Maximum Candela = 1732.635 Located At Horizontal Angle = 0, Vertical Angle = 0

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 (0) (Through Max. Cd.)