



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-14-L54-AMB-SAF12125.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]GEN FROM BALLABS TEST NO. 19835.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 13-FEB-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-56 LED 22" ARRAYS 1x4' RECESSED WHITE REFLECTOR LUMINAIRE

[MORE] PAT12 ACRYLIC LENS w/FROSTED PRISMATIC ACRYLIC LENS IN DOOR

[LUMCAT] MCTG-14-L54-AMB-SAF12125-DIM-UNV

[LAMPCAT] HLM AMBER

[_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	5437
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	63
Total Luminaire Watts	86.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.98 ft
Luminous Width (90-270)	0.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5271	5243	5100
55	4358	4272	4032
65	3160	3122	2897
75	1881	1936	1920
85	411	567	583

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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>
0	2368.568	2368.568	2368.568	2368.568	2368.568
5	2380.319	2365.434	2351.594	2346.110	2346.632
10	2344.804	2328.613	2319.473	2313.467	2314.511
15	2287.091	2272.206	2268.028	2255.232	2261.760
20	2203.525	2191.513	2192.035	2174.016	2181.589
25	2089.406	2082.355	2078.699	2060.680	2070.604
30	1952.567	1948.911	1936.637	1913.657	1924.886
35	1782.040	1785.696	1762.977	1726.417	1747.308
40	1578.871	1596.368	1559.808	1519.069	1544.139
45	1359.511	1379.358	1352.199	1302.843	1315.378
50	1137.017	1126.832	1130.227	1075.387	1073.820
55	911.651	889.715	893.632	842.970	843.492
60	688.373	672.966	668.787	622.826	630.922
65	487.032	477.370	481.287	446.294	446.555
70	318.595	309.193	320.423	306.321	299.270
75	177.577	175.749	182.800	189.329	181.233
80	75.209	72.598	82.260	94.012	84.088
85	13.057	14.624	18.019	26.637	18.541
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	863.33	N.A.	15.90
0-30	1817.9	N.A.	33.40
0-40	2915.7	N.A.	53.60
0-60	4734.43	N.A.	87.10
0-80	5404.46	N.A.	99.40
0-90	5437.02	N.A.	100.00
10-90	5213.13	N.A.	95.90
20-40	2052.37	N.A.	37.70
20-50	3085.27	N.A.	56.70
40-70	2289.26	N.A.	42.10
60-80	670.03	N.A.	12.30
70-80	199.50	N.A.	3.70
80-90	32.56	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	5437.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	223.89
10-20	639.45
20-30	954.56
30-40	1097.8
40-50	1032.91
50-60	785.82
60-70	470.53
70-80	199.50
80-90	32.56
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	120	120	120	120	117	117	117	117	112	112	112	107	107	107	103	103	103	101
1	111	107	103	100	109	105	101	98	101	98	95	97	94	92	93	91	90	88
2	102	95	89	84	100	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	84	77	71	92	83	76	70	80	74	69	77	72	68	75	70	67	65
4	87	75	67	61	84	74	67	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	49
6	74	62	53	47	72	61	53	47	59	52	46	57	51	46	56	50	46	44
7	69	56	48	42	67	55	47	42	54	47	41	52	46	41	51	45	41	39
8	64	51	43	38	63	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	33	32
10	57	44	36	31	55	43	36	31	42	36	31	41	35	31	40	35	31	29

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UGR TABLE - CORRECTED

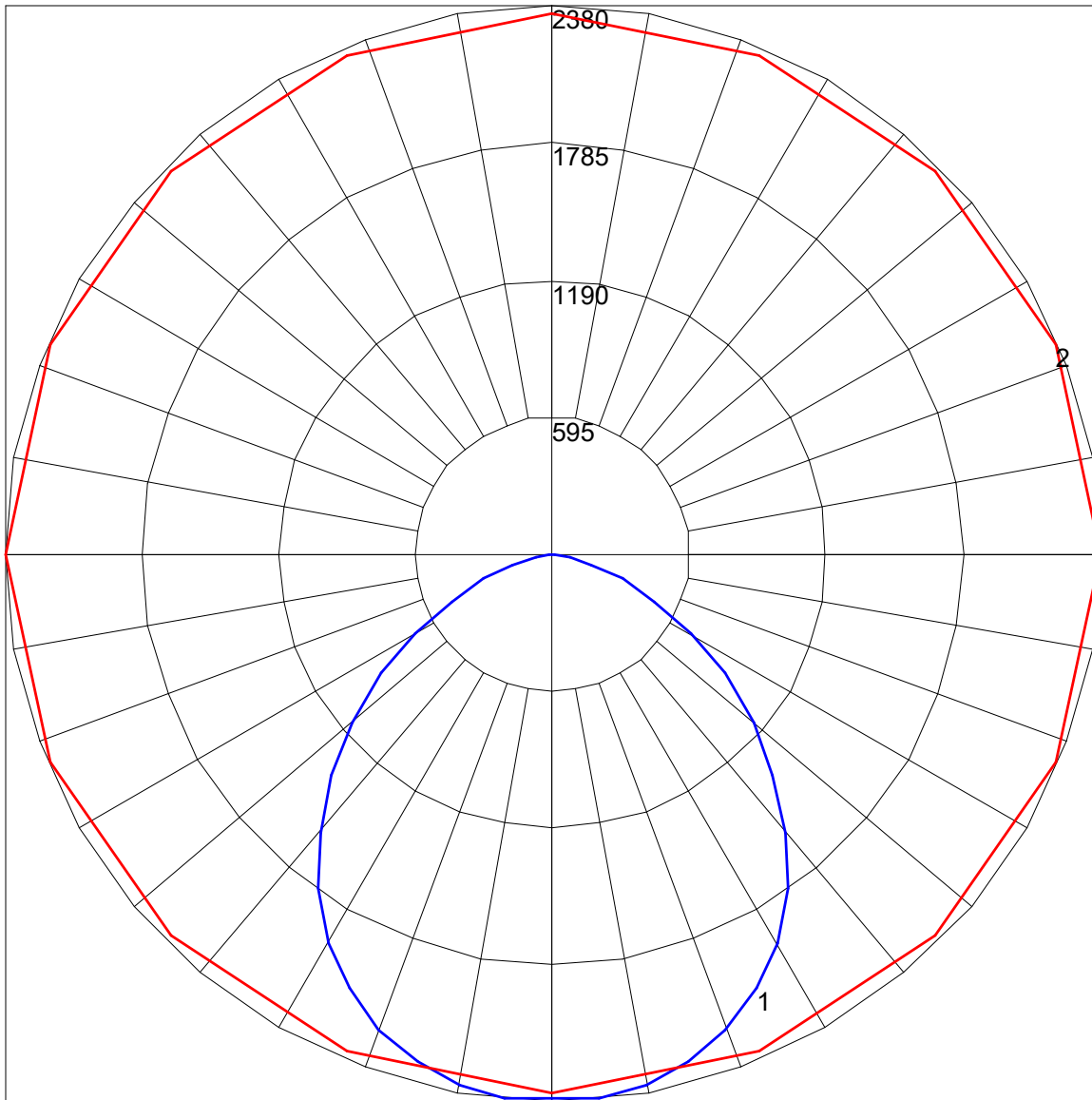
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	16.7	18.2	17.0	18.5	18.8	16.2	17.7	16.6	18.0	18.3
	3H	17.7	19.1	18.1	19.4	19.8	17.3	18.7	17.7	19.0	19.4
	4H	18.0	19.3	18.4	19.6	20.0	17.6	18.9	18.0	19.3	19.6
	6H	18.1	19.3	18.5	19.7	20.1	17.8	19.0	18.2	19.4	19.7
	8H	18.1	19.3	18.6	19.6	20.0	17.8	19.0	18.3	19.3	19.7
	12H	18.1	19.2	18.5	19.6	20.0	17.8	18.9	18.3	19.3	19.7
4H	2H	17.1	18.3	17.5	18.7	19.1	16.7	17.9	17.1	18.3	18.7
	3H	18.3	19.4	18.7	19.8	20.2	18.0	19.0	18.4	19.4	19.8
	4H	18.7	19.6	19.1	20.0	20.5	18.4	19.3	18.8	19.8	20.2
	6H	18.8	19.7	19.3	20.1	20.6	18.7	19.5	19.1	19.9	20.4
	8H	18.8	19.6	19.3	20.1	20.5	18.7	19.5	19.1	19.9	20.4
	12H	18.8	19.5	19.3	20.0	20.5	18.7	19.4	19.2	19.9	20.3
8H	4H	18.8	19.5	19.2	20.0	20.4	18.5	19.3	19.0	19.7	20.2
	6H	19.0	19.6	19.5	20.1	20.6	18.8	19.5	19.3	20.0	20.4
	8H	19.0	19.6	19.5	20.1	20.6	18.9	19.5	19.4	20.0	20.5
	12H	19.0	19.5	19.5	20.0	20.6	18.9	19.4	19.5	19.9	20.5
12H	4H	18.8	19.4	19.2	19.9	20.4	18.5	19.2	19.0	19.7	20.1
	6H	19.0	19.5	19.5	20.0	20.5	18.8	19.4	19.4	19.9	20.4
	8H	19.0	19.5	19.5	20.0	20.6	18.9	19.4	19.4	19.9	20.5

Maximum UGR = 20.6

POLAR GRAPH



Maximum Candela = 2380.319 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.)