



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-14-L40-835-SAF12125-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19835.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 13-FEB-2020

[MANUFAC] WILLIAMS INDOOR

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

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

[MORE] PAT12 ACRYLIC LENS w/CLEAR ACRYLIC LENS IN DOOR

[LUMCAT] MCTG-14-L40-835-SAF12125-DIM-UNV

[_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	4021
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	34
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	3898	3877	3772
55	3223	3159	2982
65	2337	2309	2142
75	1391	1432	1420
85	304	419	431

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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	1751.704	1751.704	1751.704	1751.704	1751.704
5	1760.394	1749.386	1739.150	1735.094	1735.481
10	1734.129	1722.154	1715.395	1710.953	1711.725
15	1691.447	1680.438	1677.348	1667.884	1672.713
20	1629.644	1620.760	1621.147	1607.821	1613.421
25	1545.246	1540.031	1537.328	1524.001	1531.340
30	1444.045	1441.341	1432.264	1415.268	1423.573
35	1317.930	1320.634	1303.831	1276.793	1292.244
40	1167.674	1180.613	1153.575	1123.446	1141.987
45	1005.443	1020.121	1000.035	963.534	972.804
50	840.895	833.363	835.874	795.316	794.157
55	674.222	657.999	660.896	623.429	623.815
60	509.095	497.700	494.610	460.619	466.606
65	360.190	353.045	355.942	330.062	330.255
70	235.621	228.668	236.972	226.543	221.329
75	131.329	129.978	135.192	140.020	134.033
80	55.622	53.691	60.836	69.527	62.188
85	9.657	10.815	13.326	19.699	13.712
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	638.49	N.A.	15.90
0-30	1344.45	N.A.	33.40
0-40	2156.34	N.A.	53.60
0-60	3501.41	N.A.	87.10
0-80	3996.93	N.A.	99.40
0-90	4021.01	N.A.	100.00
10-90	3855.43	N.A.	95.90
20-40	1517.85	N.A.	37.70
20-50	2281.75	N.A.	56.70
40-70	1693.05	N.A.	42.10
60-80	495.53	N.A.	12.30
70-80	147.54	N.A.	3.70
80-90	24.08	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	4021.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	165.58
10-20	472.91
20-30	705.96
30-40	811.89
40-50	763.90
50-60	581.17
60-70	347.99
70-80	147.54
80-90	24.08
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	60	60	60	60	59	59	59	59	56	56	56	54	54	54	52	52	52	51
1	56	54	52	50	55	53	51	49	51	49	48	49	47	46	47	46	45	44
2	51	48	45	42	50	47	44	42	45	43	41	43	41	40	42	40	39	38
3	47	42	39	36	46	42	38	35	40	37	35	39	36	34	38	35	34	33
4	44	38	34	31	42	37	33	31	36	33	30	35	32	30	34	31	29	28
5	40	34	30	27	39	34	30	27	33	29	26	32	29	26	31	28	26	25
6	37	31	27	24	36	30	26	24	30	26	23	29	26	23	28	25	23	22
7	35	28	24	21	34	28	24	21	27	23	21	26	23	21	26	23	21	20
8	32	26	22	19	32	26	22	19	25	21	19	24	21	19	24	21	19	18
9	30	24	20	17	30	24	20	17	23	19	17	22	19	17	22	19	17	16
10	28	22	18	16	28	22	18	16	21	18	16	21	18	15	20	17	15	15

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UGR TABLE - CORRECTED

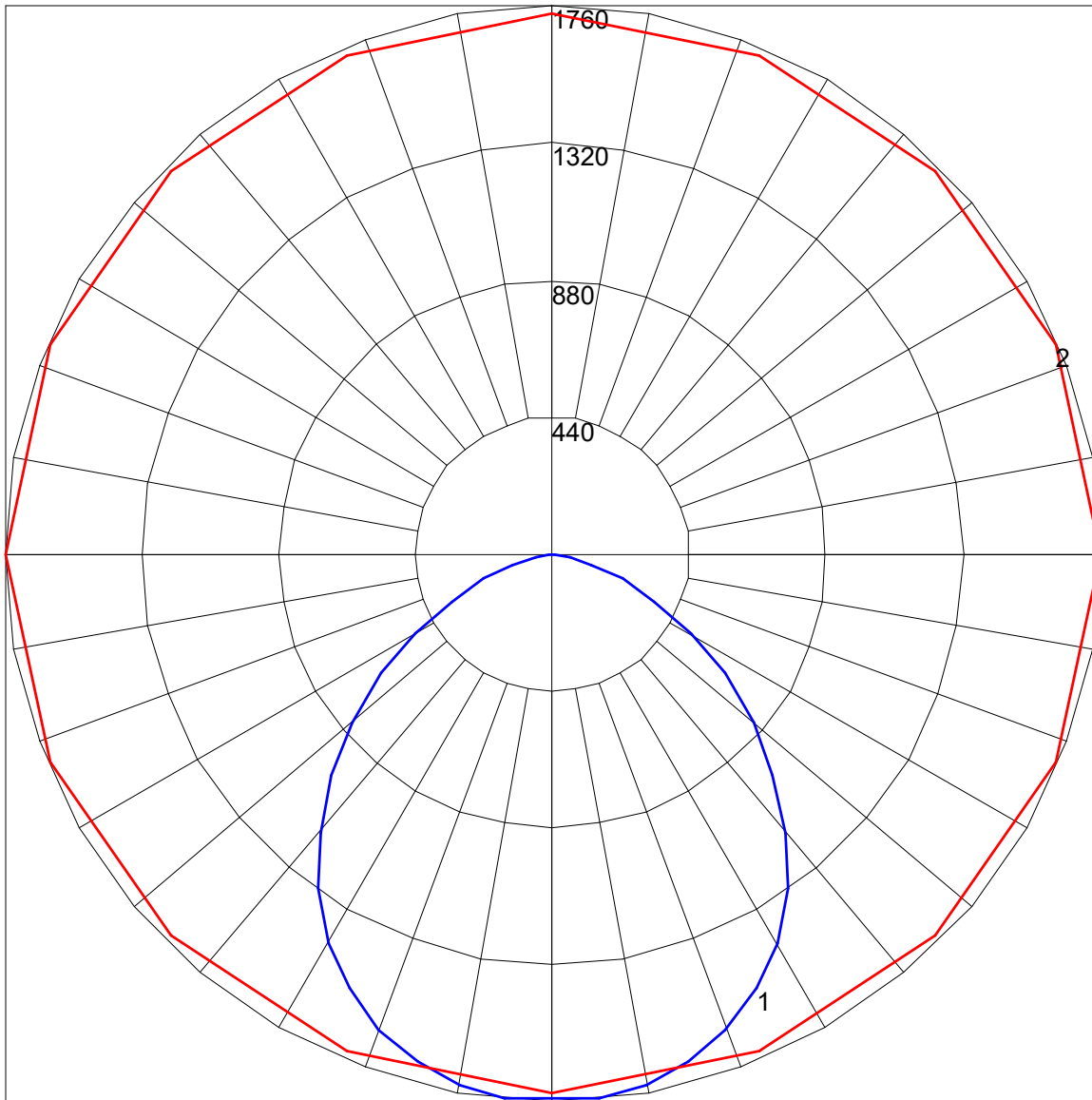
Reflectances

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	18.0	19.5	18.3	19.8	20.1	17.5	19.0	17.9	19.3	19.6
	3H	19.0	20.4	19.4	20.7	21.1	18.6	20.0	19.0	20.3	20.7
	4H	19.3	20.6	19.7	20.9	21.3	18.9	20.2	19.3	20.6	20.9
	6H	19.4	20.6	19.8	21.0	21.4	19.1	20.3	19.5	20.7	21.0
	8H	19.4	20.6	19.9	20.9	21.3	19.1	20.3	19.6	20.6	21.0
	12H	19.4	20.5	19.8	20.9	21.3	19.1	20.2	19.6	20.6	21.0
4H	2H	18.4	19.6	18.8	20.0	20.4	18.0	19.2	18.4	19.6	20.0
	3H	19.6	20.7	20.0	21.1	21.5	19.3	20.3	19.7	20.7	21.1
	4H	20.0	20.9	20.4	21.3	21.8	19.7	20.6	20.1	21.1	21.5
	6H	20.1	21.0	20.6	21.4	21.9	20.0	20.8	20.4	21.2	21.7
	8H	20.1	20.9	20.6	21.3	21.8	20.0	20.8	20.4	21.2	21.7
	12H	20.1	20.8	20.6	21.3	21.8	20.0	20.7	20.5	21.2	21.6
8H	4H	20.1	20.8	20.5	21.3	21.7	19.8	20.6	20.3	21.0	21.5
	6H	20.3	20.9	20.8	21.4	21.9	20.1	20.8	20.6	21.3	21.7
	8H	20.3	20.9	20.8	21.4	21.9	20.2	20.8	20.7	21.3	21.8
	12H	20.3	20.8	20.8	21.3	21.9	20.2	20.7	20.8	21.2	21.8
12H	4H	20.1	20.7	20.5	21.2	21.7	19.8	20.5	20.3	21.0	21.4
	6H	20.3	20.8	20.8	21.3	21.8	20.1	20.7	20.7	21.2	21.7
	8H	20.3	20.8	20.8	21.3	21.9	20.2	20.7	20.7	21.2	21.8

Maximum UGR = 21.9

POLAR GRAPH



Maximum Candela = 1760.394 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.)