



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-24-L121-840-SAF12125-(L100)-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] 08-SEP-2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2' x 4' RECESSED CLEANROOM LED LUMINAIRE

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

[LUMCAT] MCTG-24-L121-840-SAF12125-(L100)-DIM-UNV

[LAMP] 6 - 22" LED ARRAYS

[LAMPCAT] HLM 80 CRI 4000K 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	10424
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	130
Total Luminaire Watts	80.4
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)	3.57 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	7053	7015	6824
55	5831	5715	5395
65	4228	4178	3876
75	2517	2591	2569
85	550	758	780

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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	4541.100	4541.100	4541.100	4541.100	4541.100
5	4563.630	4535.092	4508.556	4498.042	4499.043
10	4495.539	4464.497	4446.973	4435.458	4437.461
15	4384.890	4356.352	4348.341	4323.808	4336.325
20	4224.675	4201.644	4202.645	4168.099	4182.618
25	4005.881	3992.363	3985.353	3950.807	3969.832
30	3743.528	3736.519	3712.987	3668.928	3690.457
35	3416.589	3423.599	3380.040	3309.946	3350.000
40	3027.066	3060.611	2990.517	2912.412	2960.477
45	2606.501	2644.552	2592.482	2497.855	2521.887
50	2179.928	2160.402	2166.911	2061.769	2058.765
55	1747.848	1705.791	1713.301	1616.171	1617.172
60	1319.773	1290.233	1282.222	1194.104	1209.625
65	933.754	915.229	922.739	855.649	856.150
70	610.820	592.796	614.325	587.289	573.771
75	340.457	336.953	350.471	362.988	347.467
80	144.194	139.187	157.712	180.242	161.217
85	25.034	28.038	34.546	51.069	35.548
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	1655.21	N.A.	15.90
0-30	3485.34	N.A.	33.40
0-40	5590.08	N.A.	53.60
0-60	9077.01	N.A.	87.10
0-80	10361.62	N.A.	99.40
0-90	10424.03	N.A.	100.00
10-90	9994.79	N.A.	95.90
20-40	3934.87	N.A.	37.70
20-50	5915.19	N.A.	56.70
40-70	4389.05	N.A.	42.10
60-80	1284.6	N.A.	12.30
70-80	382.48	N.A.	3.70
80-90	62.42	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	10424.03	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	429.24
10-20	1225.97
20-30	1830.12
30-40	2104.74
40-50	1980.32
50-60	1506.61
60-70	902.12
70-80	382.48
80-90	62.42
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	99	108	104	101	98	100	97	94	96	94	92	92	91	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	56
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	41	53	46	41	52	46	41	51	45	41	39
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	43	37	33	31
10	56	43	36	31	55	43	36	31	42	35	31	41	35	30	40	34	30	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	17.6	19.1	18.0	19.4	19.8	17.1	18.7	17.5	19.0	19.3
	3H	18.7	20.1	19.1	20.4	20.7	18.3	19.6	18.6	19.9	20.3
	4H	19.0	20.2	19.4	20.6	21.0	18.6	19.9	19.0	20.2	20.6
	6H	19.1	20.3	19.5	20.6	21.0	18.8	19.9	19.2	20.3	20.7
	8H	19.1	20.2	19.5	20.6	21.0	18.8	19.9	19.2	20.3	20.7
	12H	19.1	20.1	19.5	20.5	20.9	18.8	19.8	19.2	20.2	20.7

UGR Viewed Endwise

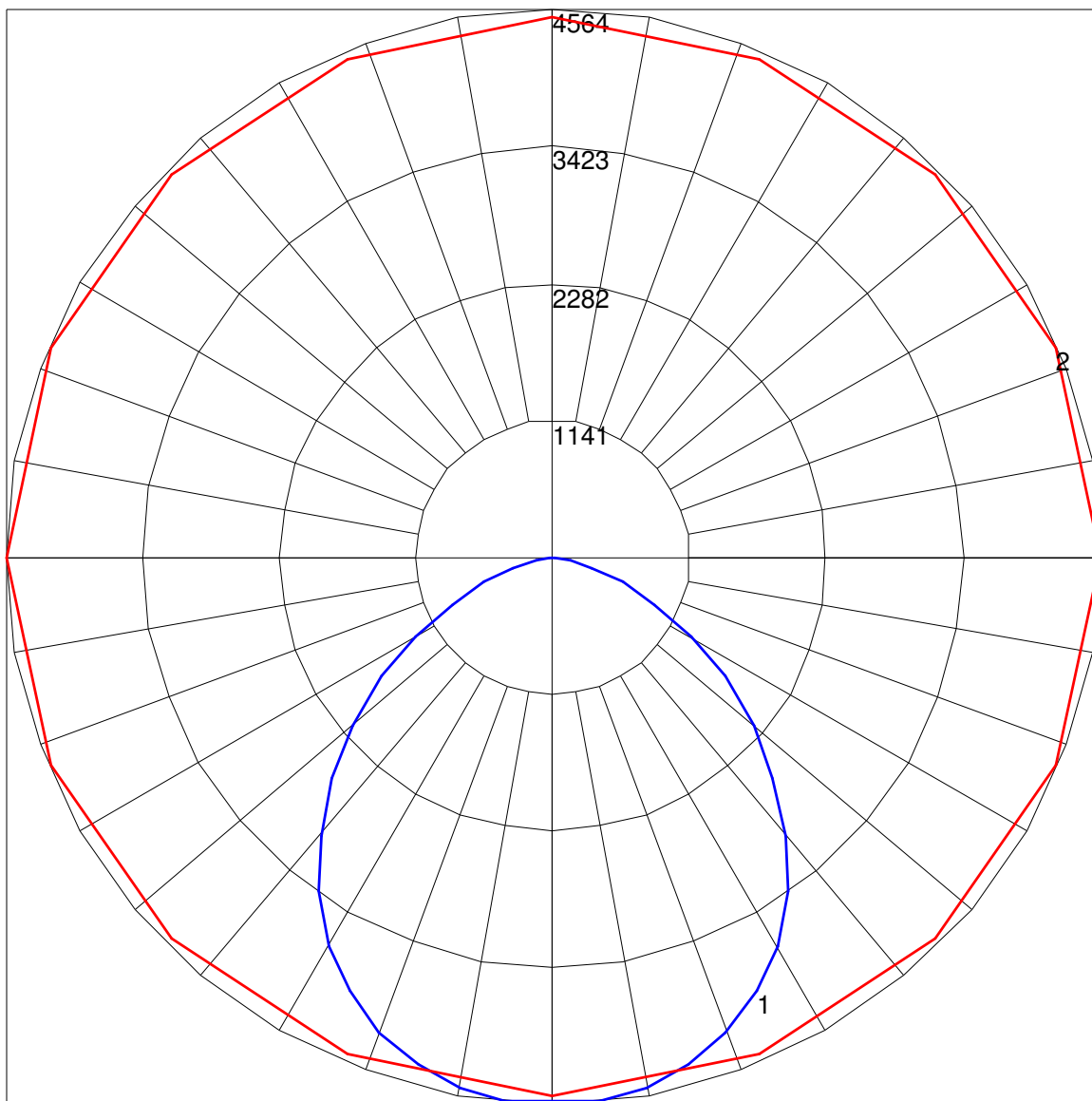
4H	2H	18.0	19.3	18.4	19.6	20.0	17.6	18.9	18.0	19.2	19.6
	3H	19.3	20.3	19.7	20.7	21.1	18.9	20.0	19.3	20.4	20.8
	4H	19.6	20.6	20.1	21.0	21.4	19.4	20.3	19.8	20.7	21.1
	6H	19.8	20.6	20.3	21.0	21.5	19.6	20.4	20.1	20.9	21.3
	8H	19.8	20.6	20.3	21.0	21.5	19.6	20.4	20.1	20.8	21.3
	12H	19.8	20.5	20.3	20.9	21.4	19.6	20.3	20.1	20.8	21.3

8H	4H	19.7	20.5	20.2	20.9	21.4	19.5	20.2	19.9	20.7	21.1
	6H	19.9	20.6	20.4	21.0	21.5	19.8	20.4	20.3	20.9	21.4
	8H	20.0	20.5	20.5	21.0	21.5	19.9	20.4	20.4	20.9	21.4
	12H	20.0	20.4	20.5	20.9	21.5	19.9	20.4	20.4	20.9	21.4

12H	4H	19.7	20.4	20.2	20.9	21.3	19.5	20.1	19.9	20.6	21.1
	6H	19.9	20.5	20.5	21.0	21.5	19.8	20.3	20.3	20.8	21.3
	8H	20.0	20.5	20.5	21.0	21.5	19.9	20.4	20.4	20.9	21.4

Maximum UGR = 21.5

POLAR GRAPH



Maximum Candela = 4563.63 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.)