



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MCTG-24-L60-935-SAF12125-(L55)-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] 28 JUNE 2022

[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-24-L60-935-xx-SAF12125-(L55)-DIM-UNV

[LAMPCAT] HLM 90 CRI 3500K 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	4697
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	42
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	3178	3161	3075
55	2627	2575	2431
65	1905	1882	1747
75	1134	1167	1157
85	248	342	352

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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	2046.196	2046.196	2046.196	2046.196	2046.196
5	2056.348	2043.488	2031.532	2026.794	2027.245
10	2025.666	2011.679	2003.783	1998.594	1999.496
15	1975.808	1962.949	1959.340	1948.285	1953.925
20	1903.616	1893.239	1893.690	1878.123	1884.666
25	1805.029	1798.938	1795.779	1780.213	1788.786
30	1686.814	1683.656	1673.053	1653.200	1662.901
35	1539.497	1542.656	1523.028	1491.444	1509.492
40	1363.980	1379.095	1347.511	1312.318	1333.975
45	1174.476	1191.621	1168.159	1125.520	1136.349
50	982.264	973.466	976.399	929.022	927.669
55	787.571	768.621	772.005	728.238	728.689
60	594.683	581.372	577.763	538.057	545.051
65	420.745	412.398	415.782	385.551	385.777
70	275.232	267.111	276.812	264.629	258.538
75	153.408	151.829	157.920	163.560	156.567
80	64.973	62.717	71.064	81.216	72.643
85	11.280	12.634	15.566	23.011	16.018
90	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	745.83	N.A.	15.90
0-30	1570.48	N.A.	33.40
0-40	2518.86	N.A.	53.60
0-60	4090.05	N.A.	87.10
0-80	4668.89	N.A.	99.40
0-90	4697.01	N.A.	100.00
10-90	4503.6	N.A.	95.90
20-40	1773.03	N.A.	37.70
20-50	2665.35	N.A.	56.70
40-70	1977.68	N.A.	42.10
60-80	578.84	N.A.	12.30
70-80	172.35	N.A.	3.70
80-90	28.12	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	4697.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	193.42
10-20	552.42
20-30	824.64
30-40	948.39
40-50	892.32
50-60	678.87
60-70	406.49
70-80	172.35
80-90	28.12
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

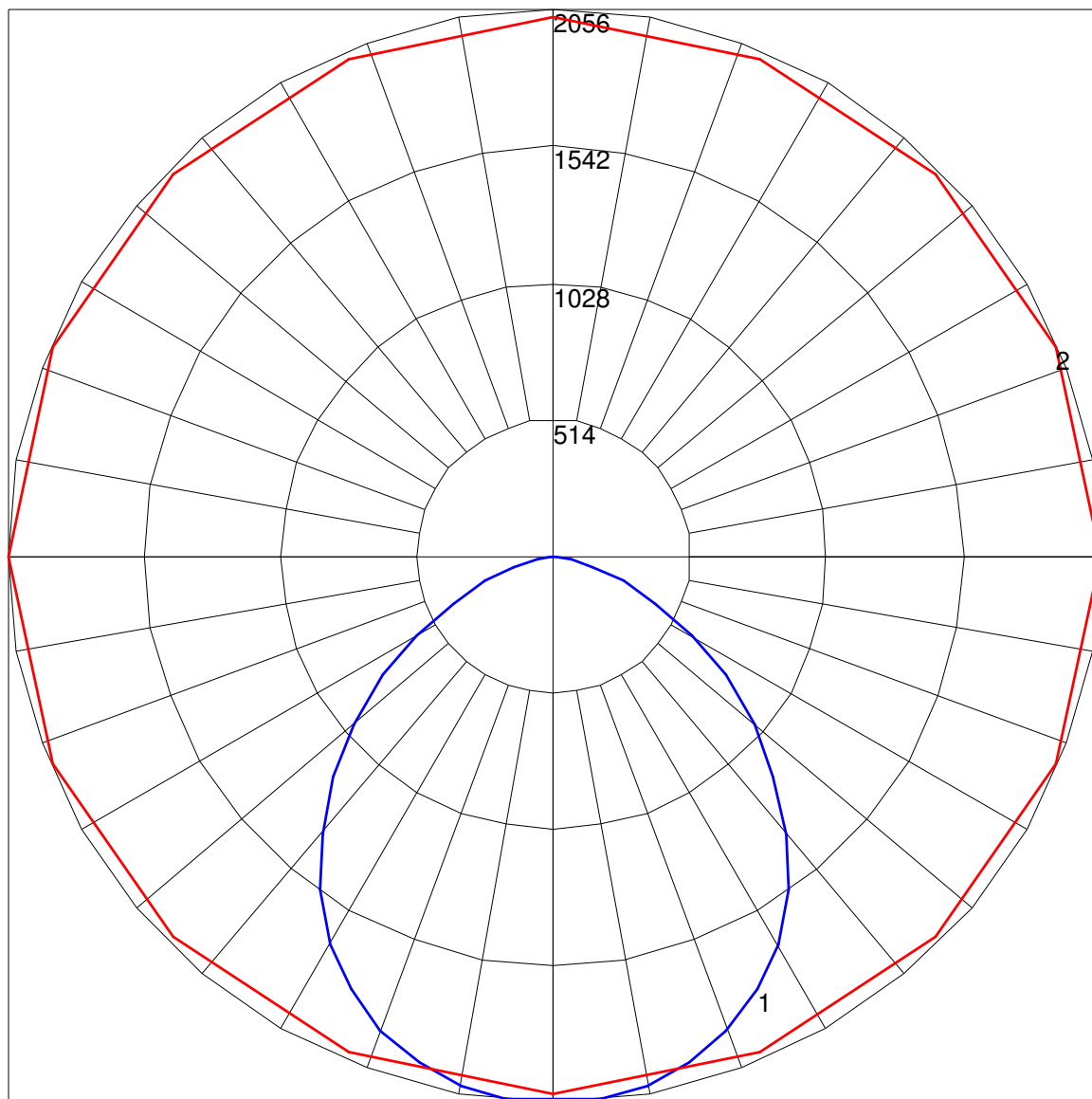
X=2H	Y=2H	14.9	16.4	15.3	16.7	17.1	14.4	16.0	14.8	16.3	16.6
	3H	16.0	17.4	16.4	17.7	18.0	15.6	16.9	15.9	17.2	17.6
	4H	16.3	17.5	16.7	17.9	18.3	15.9	17.2	16.3	17.5	17.9
	6H	16.4	17.6	16.8	17.9	18.3	16.1	17.2	16.5	17.6	18.0
	8H	16.4	17.5	16.8	17.9	18.3	16.1	17.2	16.5	17.6	18.0
	12H	16.4	17.4	16.8	17.8	18.2	16.1	17.1	16.5	17.5	18.0

UGR Viewed Endwise

4H	2H	15.3	16.6	15.7	16.9	17.3	14.9	16.2	15.3	16.5	16.9
	3H	16.6	17.6	17.0	18.0	18.4	16.2	17.3	16.6	17.7	18.1
	4H	16.9	17.9	17.4	18.3	18.7	16.7	17.6	17.1	18.0	18.4
	6H	17.1	17.9	17.6	18.3	18.8	16.9	17.7	17.4	18.2	18.6
	8H	17.1	17.9	17.6	18.3	18.8	16.9	17.7	17.4	18.1	18.6
	12H	17.1	17.8	17.6	18.2	18.7	16.9	17.6	17.4	18.1	18.6
8H	4H	17.0	17.8	17.5	18.2	18.7	16.8	17.5	17.2	18.0	18.4
	6H	17.2	17.9	17.7	18.3	18.8	17.1	17.7	17.6	18.2	18.7
	8H	17.3	17.8	17.8	18.3	18.8	17.2	17.7	17.7	18.2	18.7
	12H	17.3	17.7	17.8	18.2	18.8	17.2	17.7	17.7	18.2	18.7
12H	4H	17.0	17.7	17.5	18.2	18.6	16.8	17.4	17.2	17.9	18.4
	6H	17.2	17.8	17.8	18.3	18.8	17.1	17.6	17.6	18.1	18.6
	8H	17.3	17.8	17.8	18.3	18.8	17.2	17.7	17.7	18.2	18.7

Maximum UGR = 18.8

POLAR GRAPH



Maximum Candela = 2056.348 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.)