



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MX4S-8-00-P7-8TW-F-POE-UNV-4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 29653.0

[TESTLABV] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 15-MAR-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4-72 LED 23.75" ARRAYS 8' DOWNLIGHT LUMINAIRE

[MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENS

[LUMCAT] MX4S-8-00-P7-8TW-F-PoE-UNV 4000k

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5623
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
Total Luminaire Watts	40
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	8.00 ft
Luminous Width (90-270)	0.32 ft
Luminous Height	0.00 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	8074	7829	7707
55	7415	7113	6912
65	6311	6209	6004
75	4790	5013	4735
85	2316	2977	2812

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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	2288.480	2288.480	2288.480	2288.480	2288.480
5	2298.712	2274.838	2264.607	2257.785	2257.785
10	2257.785	2233.912	2223.680	2216.859	2210.038
15	2179.343	2162.290	2145.237	2138.416	2128.184
20	2087.258	2063.384	2049.742	2029.278	2022.457
25	1967.889	1940.604	1926.962	1903.088	1899.677
30	1848.519	1817.824	1790.540	1783.719	1766.666
35	1681.402	1660.939	1637.065	1613.191	1613.191
40	1524.517	1504.053	1473.358	1466.537	1442.664
45	1350.579	1330.115	1309.652	1289.189	1289.189
50	1186.872	1159.588	1142.535	1128.893	1111.840
55	1006.113	982.239	965.186	948.133	937.902
60	818.532	804.890	794.659	781.016	770.785
65	630.952	627.542	620.720	603.668	600.257
70	467.246	463.835	453.603	446.782	439.961
75	293.307	303.539	306.950	296.718	289.897
80	150.064	156.885	156.885	160.296	163.706
85	47.748	51.158	61.390	54.569	57.979
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	821.03	N.A.	14.60
0-30	1709.52	N.A.	30.40
0-40	2736.81	N.A.	48.70
0-60	4616.89	N.A.	82.10
0-80	5550.63	N.A.	98.70
0-90	5623.49	N.A.	100.00
10-90	5408.17	N.A.	96.20
20-40	1915.78	N.A.	34.10
20-50	2929.66	N.A.	52.10
40-70	2494.29	N.A.	44.40
60-80	933.73	N.A.	16.60
70-80	319.52	N.A.	5.70
80-90	72.86	N.A.	1.30
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	5623.49	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	215.32
10-20	605.72
20-30	888.48
30-40	1027.3
40-50	1013.88
50-60	866.20
60-70	614.21
70-80	319.52
80-90	72.86
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	118	118	118	118	116	116	116	116	110	110	110	106	106	106	101	101	101	99
1	109	104	100	97	106	102	98	95	98	95	92	94	92	89	90	88	87	85
2	99	91	85	80	97	90	84	79	86	81	77	83	79	75	80	76	73	71
3	91	81	73	67	88	79	72	66	76	70	65	74	68	64	71	67	63	61
4	83	72	63	57	81	71	63	57	68	61	56	66	60	55	64	59	54	52
5	77	64	56	49	75	63	55	49	61	54	49	59	53	48	58	52	48	45
6	71	58	50	43	69	57	49	43	56	48	43	54	47	42	52	47	42	40
7	66	53	44	38	64	52	44	38	51	43	38	49	43	38	48	42	37	36
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	34	32
9	58	45	37	31	56	44	36	31	43	36	31	42	35	31	41	35	31	29
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26

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UGR TABLE - CORRECTED

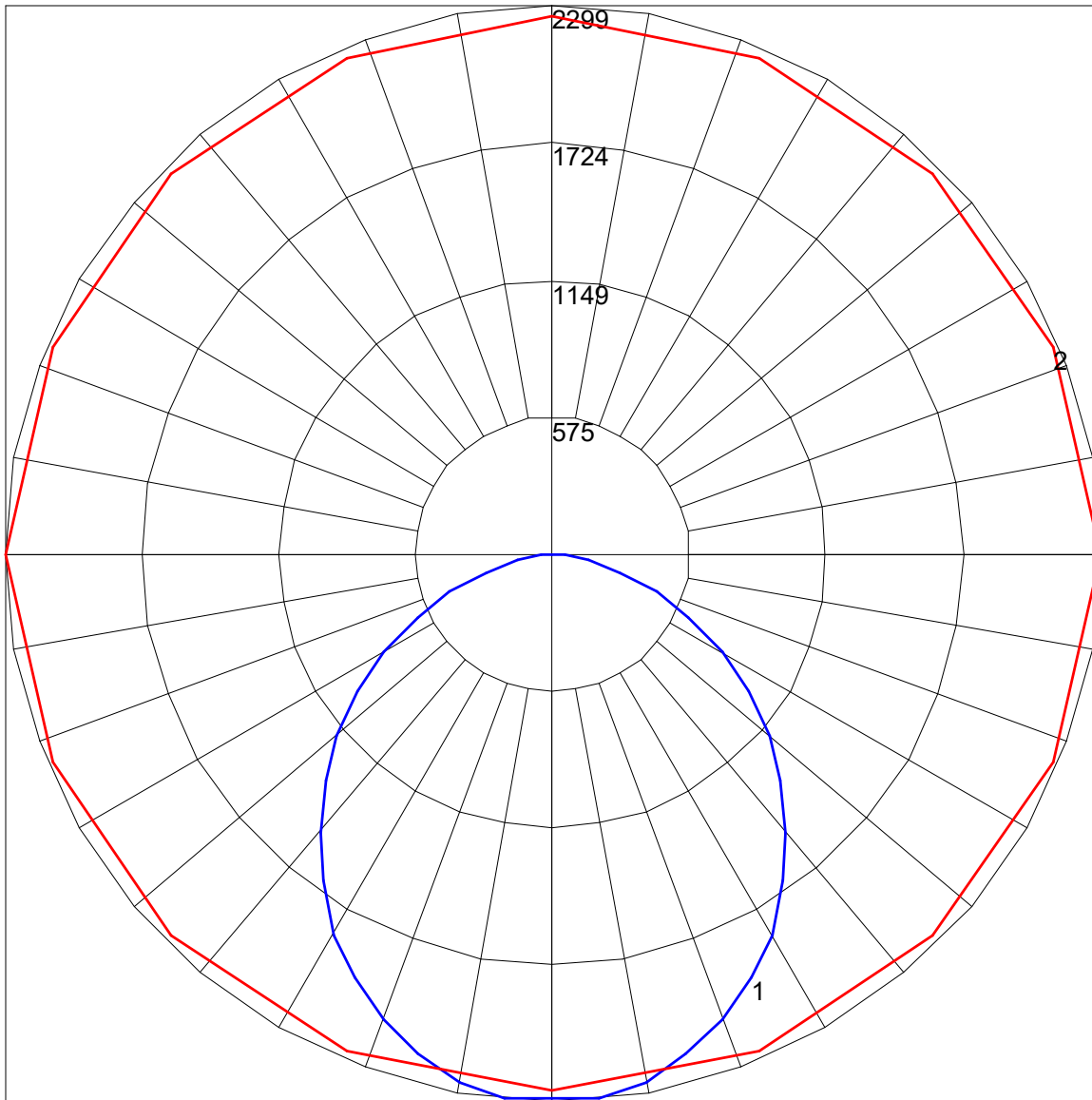
Reflectances

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	18.9	20.5	19.3	20.8	21.1	18.6	20.2	19.0	20.5	20.8
	3H	20.5	21.9	20.8	22.2	22.6	20.2	21.6	20.6	21.9	22.3
	4H	21.0	22.3	21.4	22.7	23.1	20.7	22.1	21.1	22.4	22.8
	6H	21.3	22.5	21.7	22.9	23.3	21.1	22.3	21.5	22.7	23.1
	8H	21.4	22.6	21.8	22.9	23.3	21.2	22.4	21.6	22.8	23.2
	12H	21.4	22.5	21.8	22.9	23.3	21.2	22.4	21.7	22.7	23.2
4H	2H	19.4	20.8	19.8	21.1	21.5	19.2	20.6	19.6	20.9	21.3
	3H	21.2	22.3	21.6	22.7	23.1	21.0	22.1	21.4	22.5	22.9
	4H	21.9	22.9	22.3	23.3	23.7	21.6	22.6	22.1	23.1	23.5
	6H	22.3	23.2	22.7	23.6	24.0	22.1	23.0	22.5	23.4	23.9
	8H	22.4	23.2	22.8	23.6	24.1	22.2	23.1	22.7	23.5	24.0
	12H	22.4	23.2	22.9	23.6	24.1	22.3	23.0	22.8	23.5	24.0
8H	4H	22.1	22.9	22.5	23.4	23.8	21.9	22.7	22.3	23.2	23.6
	6H	22.6	23.3	23.1	23.8	24.2	22.4	23.1	22.9	23.6	24.1
	8H	22.7	23.3	23.2	23.9	24.3	22.6	23.2	23.1	23.7	24.2
	12H	22.8	23.4	23.3	23.9	24.4	22.8	23.3	23.3	23.8	24.3
12H	4H	22.1	22.8	22.6	23.3	23.8	21.9	22.6	22.4	23.1	23.6
	6H	22.6	23.2	23.1	23.7	24.2	22.5	23.1	23.0	23.6	24.1
	8H	22.8	23.3	23.3	23.8	24.4	22.7	23.2	23.2	23.7	24.3

Maximum UGR = 24.4

POLAR GRAPH



Maximum Candela = 2298.712 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.)