IES INDOOR REPORT
PHOTOMETRIC FILENAME : MX4RX-4-P7-835-F-POE X_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20647.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 12-MAR-2020
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2-72 LED 23.75" ARRAYS 4' RECESSED GRID LUMINAIRE
[MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENS
[LUMCAT] MX4Rx-4-P7-835-F-PoE

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2997
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	24
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 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	8653	8468	8120
55	8013	7533	7406
65	6758	6518	6312
75	5042	4986	5042
85	2329	2329	2329

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1226.182	1226.182	1226.182	1226.182	1226.182
5	1233.042	1219.322	1210.748	1209.033	1209.033
10	1210.748	1197.028	1186.738	1185.024	1183.309
15	1176.449	1159.299	1147.295	1145.580	1140.435
20	1116.426	1104.421	1100.991	1094.132	1085.557
25	1051.258	1040.969	1034.109	1023.819	1018.674
30	979.231	967.226	955.222	948.362	941.502
35	902.058	895.199	874.619	878.049	859.185
40	816.311	811.167	804.307	783.728	773.438
45	723.705	716.845	708.270	687.691	679.116
50	629.383	625.953	608.804	598.514	591.654
55	543.636	531.631	511.052	511.052	502.477
60	428.735	432.165	416.730	411.586	401.296
65	337.843	334.413	325.839	318.979	315.549
70	250.381	243.521	234.947	231.517	229.802
75	154.345	150.915	152.630	149.200	154.345
80	78.887	75.457	78.887	85.747	78.887
85	24.009	24.009	24.009	29.154	24.009
90	1.715	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	439.98	N.A.	14.70
0-30	915.75	N.A.	30.60
0-40	1467.1	N.A.	49.00
0-60	2473.4	N.A.	82.50
0-80	2961.11	N.A.	98.80
0-90	2996.63	N.A.	100.00
10-90	2881.36	N.A.	96.20
20-40	1027.11	N.A.	34.30
20-50	1570.85	N.A.	52.40
40-70	1330.31	N.A.	44.40
60-80	487.71	N.A.	16.30
70-80	163.70	N.A.	5.50
80-90	35.53	N.A.	1.20
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	2996.63	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	115.27
10-20	324.71
20-30	475.77
30-40	551.34
40-50	543.74
50-60	462.56
60-70	324.01
70-80	163.70
80-90	35.53
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	115	115	115	115	113	113	113	113	108	108	108	103	103	103	99	99	99	97
1	106	102	98	94	104	100	96	93	96	93	90	92	89	87	88	86	85	83
2	97	89	83	78	95	88	82	77	84	79	75	81	77	73	78	75	72	70
3	89	79	71	65	86	77	70	65	75	69	64	72	67	63	70	65	61	59
4	82	70	62	56	79	69	61	55	67	60	55	64	59	54	62	57	53	51
5	75	63	55	48	73	62	54	48	60	53	48	58	52	47	56	51	47	45
6	70	57	49	42	68	56	48	42	54	47	42	53	46	42	51	46	41	39
7	65	52	44	38	63	51	43	38	50	42	37	48	42	37	47	41	37	35
8	60	47	39	34	59	47	39	34	45	38	33	44	38	33	43	37	33	31
9	56	44	36	30	55	43	36	30	42	35	30	41	35	30	40	34	30	28
10	53	40	33	28	52	40	33	28	39	32	28	38	32	27	37	31	27	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	19.3	20.9	19.6	21.2	21.5	18.9	20.5	19.3	20.8	21.1
	3H	20.8	22.3	21.2	22.6	22.9	20.5	21.9	20.8	22.2	22.6
	4H	21.3	22.7	21.7	23.0	23.4	21.0	22.3	21.4	22.7	23.0
	6H	21.6	22.8	22.0	23.2	23.6	21.3	22.5	21.7	22.9	23.3
	8H	21.6	22.8	22.1	23.2	23.6	21.4	22.6	21.8	22.9	23.3
	12H	21.7	22.8	22.1	23.2	23.6	21.4	22.5	21.8	22.9	23.3
4H	2H	19.8	21.1	20.2	21.5	21.9	19.5	20.8	19.9	21.2	21.6
	3H	21.5	22.7	22.0	23.1	23.5	21.2	22.3	21.6	22.7	23.1
	4H	22.1	23.1	22.6	23.5	24.0	21.9	22.8	22.3	23.3	23.7
	6H	22.5	23.4	23.0	23.8	24.3	22.3	23.2	22.7	23.6	24.1
	8H	22.6	23.4	23.1	23.8	24.3	22.4	23.2	22.9	23.7	24.1
	12H	22.6	23.4	23.1	23.8	24.3	22.5	23.2	22.9	23.7	24.1
8H	4H	22.3	23.1	22.8	23.6	24.1	22.1	22.9	22.5	23.3	23.8
	6H	22.8	23.4	23.3	23.9	24.4	22.6	23.3	23.1	23.8	24.2
	8H	22.9	23.5	23.4	24.0	24.5	22.8	23.4	23.3	23.9	24.4
	12H	23.0	23.5	23.5	24.0	24.6	22.9	23.4	23.4	23.9	24.5
12H	4H	22.3	23.1	22.8	23.5	24.0	22.1	22.8	22.6	23.3	23.8
	6H	22.8	23.4	23.3	23.9	24.4	22.6	23.2	23.2	23.7	24.2
	8H	23.0	23.5	23.5	24.0	24.5	22.8	23.4	23.3	23.9	24.4

Maximum UGR = 24.6

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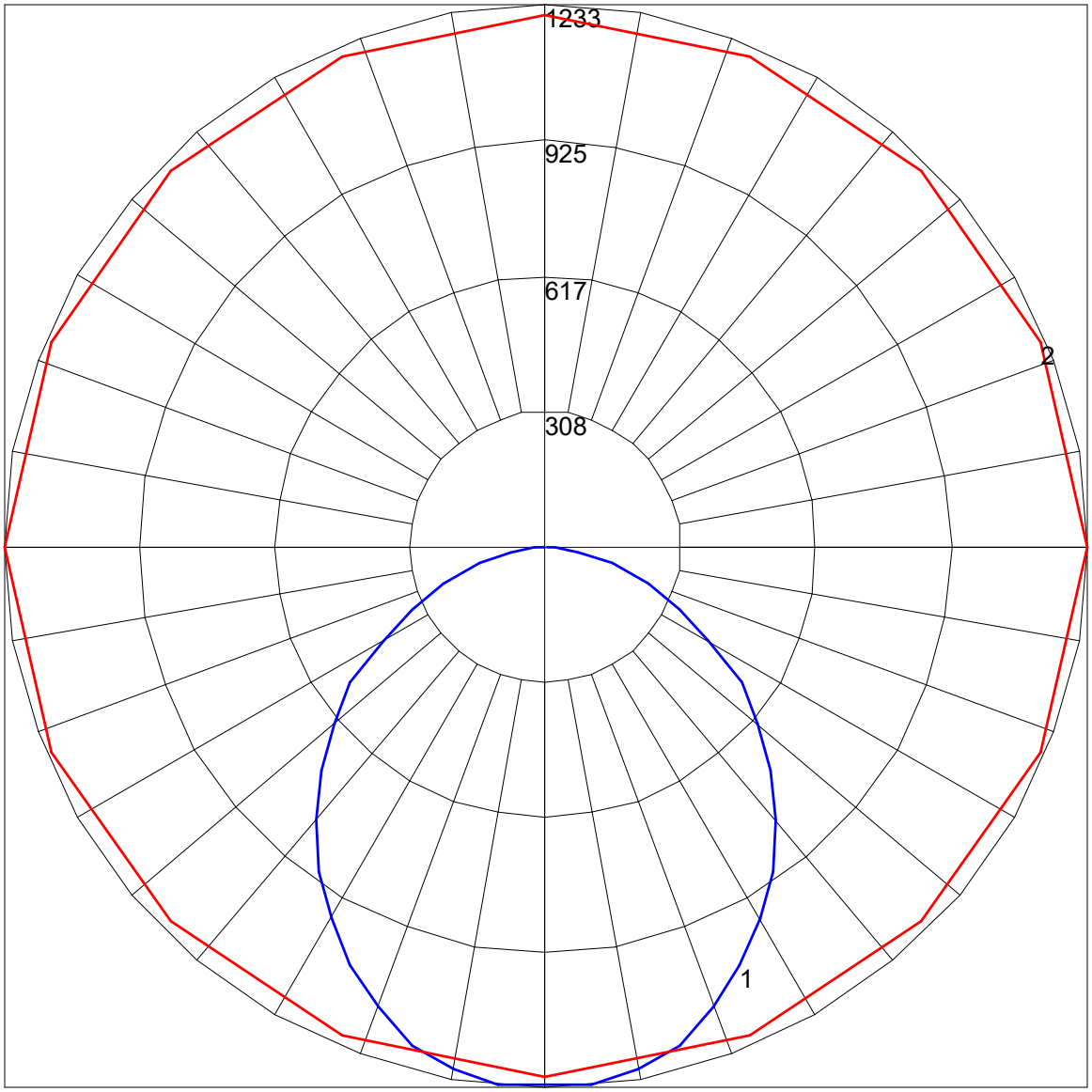
POLAR GRAPH



Maximum Candela = 1233.042 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.)

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