IES INDOOR REPORT
PHOTOMETRIC FILENAME : MX4WD-4-00-P7-835-F-POE-UNV_.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] 2-72 LED 23.75" ARRAYS 4' DOWNLIGHT LUMINAIRE
[MORE] WHITE ALUM BODY w/WHITE REFL & FLAT FROST LENS
[LUMCAT] MX4D-4-00-P7-835-F-PoE-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2828
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	24
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)	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	8120	7874	7751
55	7457	7154	6951
65	6347	6244	6038
75	4818	5042	4762
85	2329	2994	2828

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1150.751	1150.751	1150.751	1150.751	1150.751
5	1155.896	1143.891	1138.746	1135.316	1135.316
10	1135.316	1123.311	1118.166	1114.736	1111.306
15	1095.872	1087.297	1078.722	1075.292	1070.147
20	1049.567	1037.562	1030.702	1020.413	1016.983
25	989.543	975.823	968.963	956.958	955.243
30	929.519	914.084	900.364	896.934	888.359
35	845.485	835.195	823.190	811.185	811.185
40	766.596	756.306	740.871	737.441	725.436
45	679.132	668.842	658.552	648.262	648.262
50	596.813	583.093	574.518	567.658	559.083
55	505.919	493.914	485.339	476.764	471.619
60	411.595	404.735	399.590	392.730	387.585
65	317.271	315.556	312.126	303.551	301.836
70	234.952	233.237	228.092	224.662	221.232
75	147.488	152.633	154.348	149.203	145.773
80	75.459	78.889	78.889	80.604	82.319
85	24.010	25.725	30.870	27.440	29.155
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	412.85	N.A.	14.60
0-30	859.62	N.A.	30.40
0-40	1376.19	N.A.	48.70
0-60	2321.58	N.A.	82.10
0-80	2791.1	N.A.	98.70
0-90	2827.74	N.A.	100.00
10-90	2719.47	N.A.	96.20
20-40	963.34	N.A.	34.10
20-50	1473.17	N.A.	52.10
40-70	1254.24	N.A.	44.40
60-80	469.52	N.A.	16.60
70-80	160.67	N.A.	5.70
80-90	36.64	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	2827.74	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	108.27
10-20	304.58
20-30	446.77
30-40	516.57
40-50	509.83
50-60	435.56
60-70	308.85
70-80	160.67
80-90	36.64
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	102	102	102	102	100	100	100	100	95	95	95	91	91	91	88	88	88	86
1	94	90	86	83	92	88	85	82	84	82	79	81	79	77	78	76	75	73
2	86	79	73	69	83	77	72	68	74	70	66	72	68	65	69	66	63	61
3	78	70	63	58	76	68	62	57	66	60	56	63	59	55	61	57	54	52
4	72	62	55	49	70	61	54	49	59	53	48	57	52	47	55	51	47	45
5	66	56	48	43	65	55	48	42	53	47	42	51	46	41	50	45	41	39
6	61	50	43	37	60	49	42	37	48	42	37	46	41	37	45	40	36	35
7	57	46	38	33	56	45	38	33	44	37	33	42	37	33	41	36	32	31
8	53	42	35	30	52	41	34	30	40	34	29	39	33	29	38	33	29	27
9	50	38	32	27	49	38	31	27	37	31	27	36	30	26	35	30	26	25
10	47	36	29	24	46	35	29	24	34	28	24	33	28	24	33	28	24	23

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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	19.4	21.0	19.8	21.3	21.6	19.1	20.7	19.5	21.0	21.4
	3H	21.0	22.4	21.4	22.7	23.1	20.7	22.1	21.1	22.4	22.8
	4H	21.5	22.8	21.9	23.2	23.6	21.2	22.6	21.6	22.9	23.3
	6H	21.8	23.1	22.2	23.4	23.8	21.6	22.8	22.0	23.2	23.6
	8H	21.9	23.1	22.3	23.5	23.9	21.7	22.9	22.1	23.3	23.7
	12H	21.9	23.0	22.3	23.4	23.9	21.7	22.9	22.2	23.3	23.7
4H	2H	19.9	21.3	20.3	21.6	22.0	19.7	21.1	20.1	21.4	21.8
	3H	21.7	22.9	22.1	23.3	23.7	21.5	22.6	21.9	23.0	23.4
	4H	22.4	23.4	22.8	23.8	24.2	22.1	23.2	22.6	23.6	24.0
	6H	22.8	23.7	23.2	24.1	24.6	22.6	23.5	23.1	23.9	24.4
	8H	22.9	23.7	23.3	24.1	24.6	22.7	23.6	23.2	24.0	24.5
	12H	22.9	23.7	23.4	24.1	24.6	22.8	23.6	23.3	24.0	24.5
8H	4H	22.6	23.4	23.1	23.9	24.3	22.4	23.2	22.9	23.7	24.1
	6H	23.1	23.8	23.6	24.3	24.7	23.0	23.6	23.4	24.1	24.6
	8H	23.2	23.9	23.7	24.4	24.9	23.1	23.7	23.6	24.3	24.7
	12H	23.3	23.9	23.9	24.4	24.9	23.3	23.8	23.8	24.3	24.9
12H	4H	22.6	23.4	23.1	23.8	24.3	22.4	23.2	22.9	23.6	24.1
	6H	23.1	23.7	23.6	24.2	24.7	23.0	23.6	23.5	24.1	24.6
	8H	23.3	23.9	23.8	24.3	24.9	23.2	23.7	23.7	24.2	24.8

Maximum UGR = 24.9

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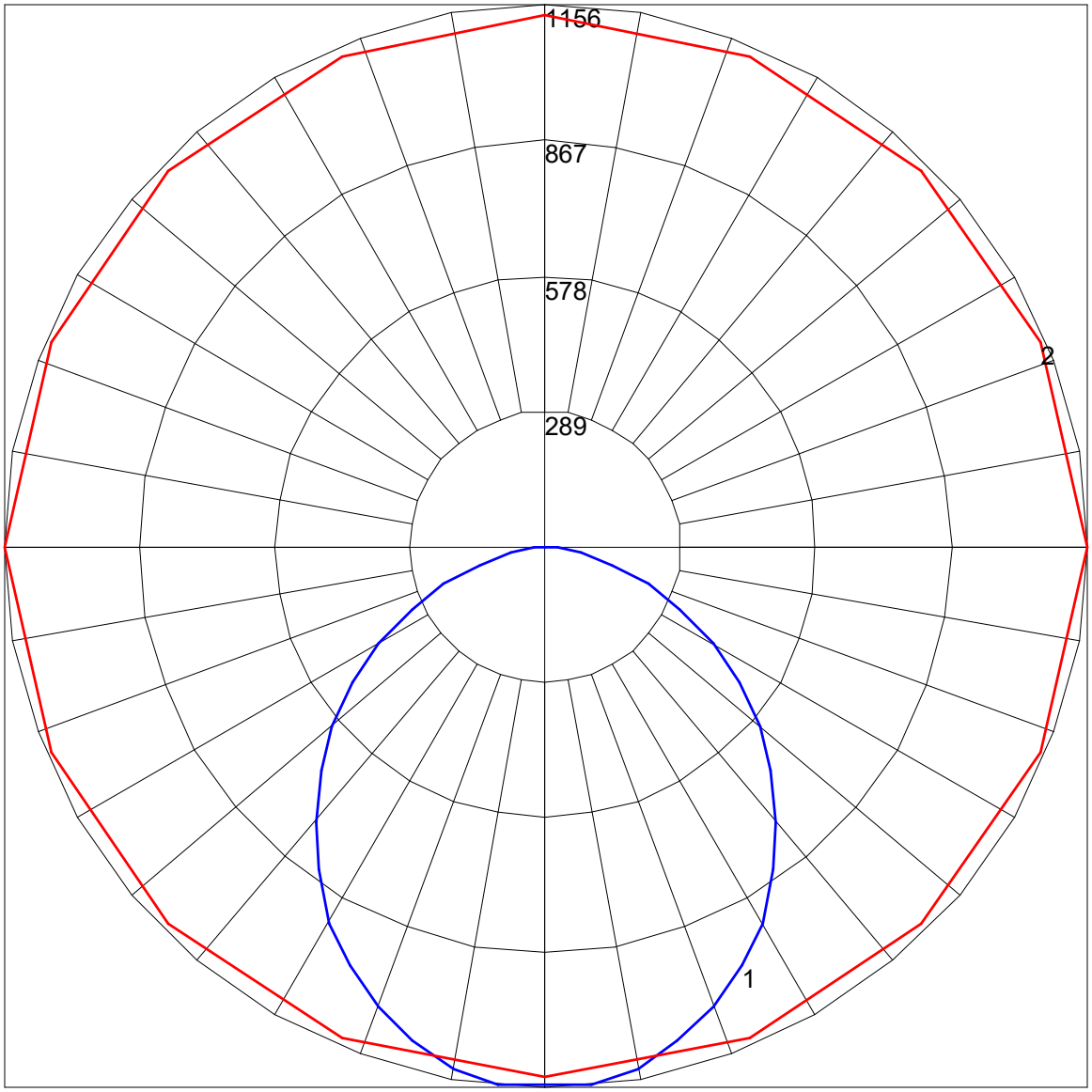
POLAR GRAPH



Maximum Candela = 1155.896 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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