H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : MX4WD-4-00-L8-940-F-EM10W-DIM-UNV_(EMER MODE).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] 03-31-2023
[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] MX4WD-4-00-L8-940-F-EM10W-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1027
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	10
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	2949	2859	2815
55	2708	2598	2524
65	2305	2268	2193
75	1750	1831	1729
85	846	1087	1027

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	417.900	417.900	417.900	417.900	417.900
5	419.768	415.409	413.540	412.295	412.295
10	412.295	407.935	406.067	404.821	403.576
15	397.970	394.856	391.742	390.497	388.628
20	381.155	376.795	374.304	370.567	369.321
25	359.357	354.374	351.883	347.523	346.901
30	337.559	331.953	326.971	325.725	322.611
35	307.041	303.304	298.945	294.585	294.585
40	278.392	274.656	269.050	267.805	263.445
45	246.629	242.893	239.156	235.419	235.419
50	216.735	211.753	208.639	206.147	203.033
55	183.727	179.367	176.253	173.139	171.270
60	149.472	146.981	145.113	142.622	140.753
65	115.218	114.596	113.350	110.236	109.613
70	85.324	84.701	82.833	81.587	80.341
75	53.561	55.429	56.052	54.184	52.938
80	27.403	28.649	28.649	29.272	29.894
85	8.719	9.342	11.210	9.965	10.588
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	149.93	N.A.	14.60
0-30	312.17	N.A.	30.40
0-40	499.77	N.A.	48.70
0-60	843.09	N.A.	82.10
0-80	1013.6	N.A.	98.70
0-90	1026.91	N.A.	100.00
10-90	987.59	N.A.	96.20
20-40	349.84	N.A.	34.10
20-50	534.99	N.A.	52.10
40-70	455.48	N.A.	44.40
60-80	170.51	N.A.	16.60
70-80	58.35	N.A.	5.70
80-90	13.31	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	1026.91	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	39.32
10-20	110.61
20-30	162.25
30-40	187.59
40-50	185.15
50-60	158.18
60-70	112.16
70-80	58.35
80-90	13.31
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	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	87	82	77	83	79	75	80	77	74	72
3	91	81	73	67	89	80	72	67	77	70	65	74	69	64	71	67	63	61
4	84	72	64	57	82	71	63	57	68	62	56	66	60	55	64	59	55	52
5	77	65	56	50	75	64	56	49	62	54	49	60	53	48	58	52	48	46
6	72	59	50	44	70	58	49	43	56	48	43	54	48	43	53	47	42	40
7	66	53	45	39	65	52	44	39	51	44	38	49	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	57	44	36	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	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	15.4	17.0	15.8	17.3	17.6	15.1	16.7	15.5	17.0	17.4
	3H	17.0	18.4	17.4	18.7	19.1	16.7	18.1	17.1	18.4	18.8
	4H	17.5	18.8	17.9	19.2	19.6	17.2	18.6	17.6	18.9	19.3
	6H	17.8	19.1	18.2	19.4	19.8	17.6	18.8	18.0	19.2	19.6
	8H	17.9	19.1	18.3	19.5	19.9	17.7	18.9	18.1	19.3	19.7
	12H	17.9	19.0	18.3	19.4	19.9	17.7	18.9	18.2	19.3	19.7
4H	2H	15.9	17.3	16.3	17.6	18.0	15.7	17.1	16.1	17.4	17.8
	3H	17.7	18.9	18.1	19.3	19.7	17.5	18.6	17.9	19.0	19.4
	4H	18.4	19.4	18.8	19.8	20.2	18.1	19.2	18.6	19.6	20.0
	6H	18.8	19.7	19.2	20.1	20.6	18.6	19.5	19.1	19.9	20.4
	8H	18.9	19.7	19.3	20.1	20.6	18.7	19.6	19.2	20.0	20.5
	12H	18.9	19.7	19.4	20.1	20.6	18.8	19.6	19.3	20.0	20.5
8H	4H	18.6	19.4	19.1	19.9	20.3	18.4	19.2	18.9	19.7	20.1
	6H	19.1	19.8	19.6	20.3	20.7	19.0	19.6	19.4	20.1	20.6
	8H	19.2	19.9	19.7	20.4	20.9	19.1	19.7	19.6	20.3	20.7
	12H	19.3	19.9	19.9	20.4	20.9	19.3	19.8	19.8	20.3	20.9
12H	4H	18.6	19.4	19.1	19.8	20.3	18.4	19.2	18.9	19.6	20.1
	6H	19.1	19.7	19.6	20.2	20.7	19.0	19.6	19.5	20.1	20.6
	8H	19.3	19.9	19.8	20.3	20.9	19.2	19.7	19.7	20.2	20.8

Maximum UGR = 20.9

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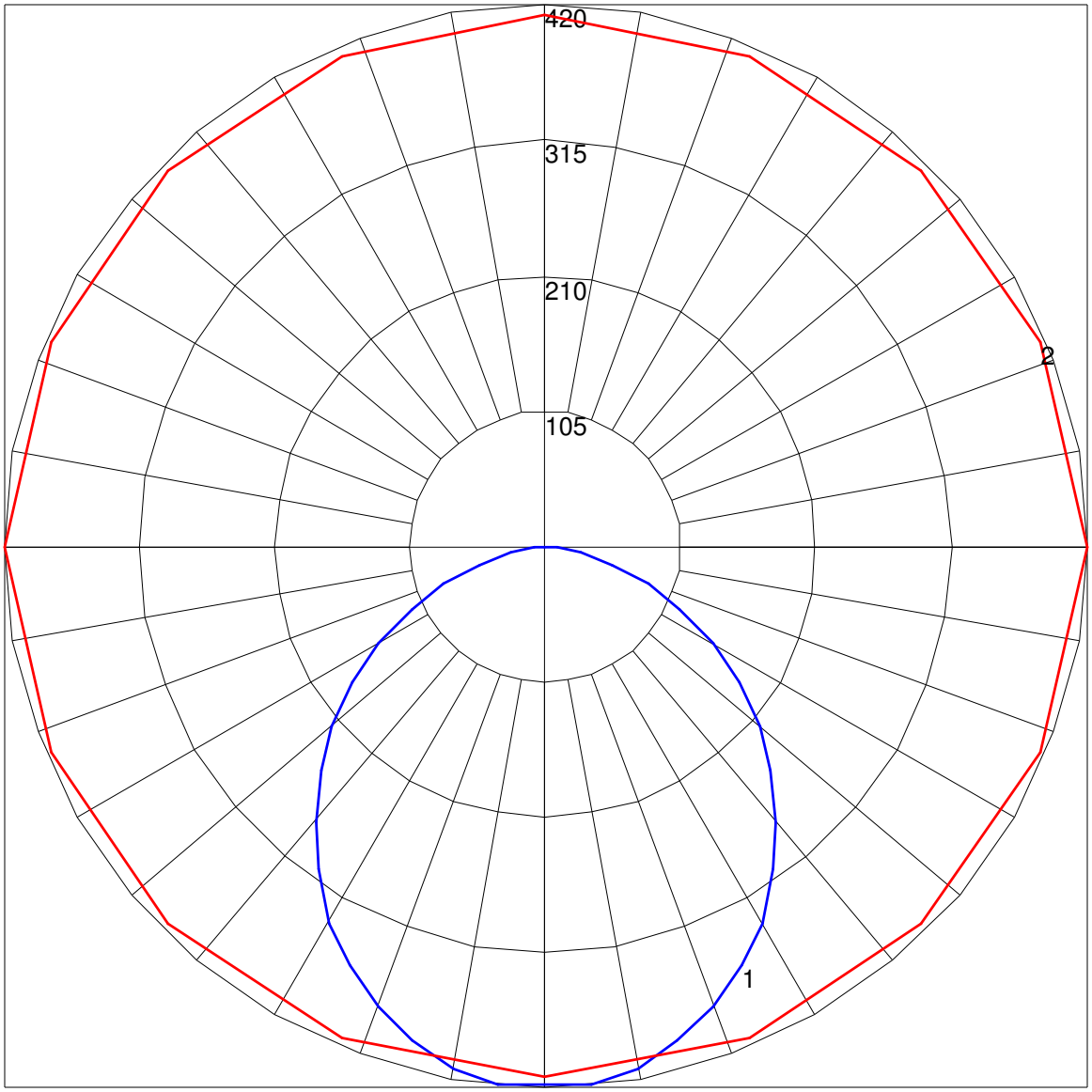
POLAR GRAPH



Maximum Candela = 419.768 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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