

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : GA-4-L90-827-N-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] GEN FROM BALLABS TEST NO. 20801.0  
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
[ISSUE DATE] 09-07-2023  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
[LUMINAIRE] 4' LED STRIP AISLE LUMINAIRE  
[MORE] WHITE REFLECTOR w/.375"DIA ACRYLIC ROD OPTIC  
[LUMCAT] GA-4-L90-827-N-DIM-UNV  
[LAMPCAT] HLM 80 CRI 2700K CCT  
[ \_SEARCH\_SOURCETYPE] LED  
[ \_SEARCH\_APPLICATION] INDOOR  
[ \_SEARCH\_MOUNTING] SURFACE, SUSPENDED

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8396
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	75.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.42
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.72
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.38 ft
Luminous Height	0.03 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	59416	5708	3625
55	44146	2748	2428
65	27412	2221	2221
75	13767	3173	3745
85	3441	6409	7333

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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	8100.100	8100.100	8100.100	8100.100	8100.100
5	8338.287	8089.592	7877.676	7602.710	7373.281
10	8313.768	7868.919	7238.425	6579.909	6199.861
15	8289.249	7492.374	6156.076	5121.015	4655.150
20	8234.956	6781.316	4684.923	3418.680	3029.875
25	8124.620	5847.835	3199.759	2061.366	1753.124
30	7903.947	4635.884	1851.201	1147.149	1007.040
35	7506.385	3450.205	1094.608	721.566	665.522
40	6842.615	2240.006	747.836	544.677	481.628
45	5905.630	1462.396	598.970	441.346	387.053
50	4783.000	1033.310	462.362	350.275	306.490
55	3571.050	817.891	239.938	229.430	217.170
60	2541.242	467.617	161.126	164.629	169.883
65	1642.788	243.441	148.867	157.624	154.121
70	982.520	189.148	141.861	162.878	162.878
75	511.401	164.629	141.861	176.889	176.889
80	217.170	148.867	148.867	161.126	162.878
85	45.536	131.353	134.856	166.380	173.386
90	7.005	54.293	59.547	94.574	103.331
95	3.503	1.751	12.260	61.298	64.801
100	0.000	0.000	0.000	0.000	0.000
105	0.000	0.000	0.000	0.000	0.000
110	0.000	0.000	0.000	0.000	0.000
115	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.000	0.000
125	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000
135	0.000	0.000	0.000	0.000	0.000
140	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	2477.02	N.A.	29.50
0-30	4325.98	N.A.	51.50
0-40	5805.54	N.A.	69.10
0-60	7626.86	N.A.	90.80
0-80	8227.23	N.A.	98.00
0-90	8363.28	N.A.	99.60
10-90	7632.62	N.A.	90.90
20-40	3328.52	N.A.	39.60
20-50	4430.22	N.A.	52.80
40-70	2199.15	N.A.	26.20
60-80	600.36	N.A.	7.20
70-80	222.53	N.A.	2.70
80-90	136.05	N.A.	1.60
90-110	32.97	N.A.	0.40
90-120	32.97	N.A.	0.40
90-130	32.97	N.A.	0.40
90-150	32.97	N.A.	0.40
90-180	32.97	N.A.	0.40
110-180	0.00	N.A.	0.00
0-180	8396.25	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	730.66
10-20	1746.36
20-30	1848.96
30-40	1479.56
40-50	1101.7
50-60	719.63
60-70	377.83
70-80	222.53
80-90	136.05
90-100	32.97
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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	73	69	66	64
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	57	78	68	62	57	67	61	56	65	60	56	64	59	55	53
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49
8	71	60	53	48	70	59	53	48	58	52	48	57	52	47	56	51	47	46
9	67	56	49	45	66	56	49	45	55	49	44	54	48	44	53	48	44	42
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

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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	20.4	21.7	20.8	22.0	22.4	8.8	10.1	9.2	10.5	10.8
	3H	22.2	23.3	22.6	23.7	24.1	11.6	12.7	12.0	13.1	13.5
	4H	22.7	23.8	23.1	24.1	24.6	13.5	14.6	13.9	15.0	15.4
	6H	23.0	24.0	23.4	24.4	24.8	15.4	16.4	15.9	16.8	17.3
	8H	23.0	24.0	23.5	24.4	24.8	16.5	17.5	17.0	17.9	18.3
	12H	23.0	23.9	23.5	24.3	24.8	17.8	18.7	18.3	19.1	19.6

UGR Viewed Endwise

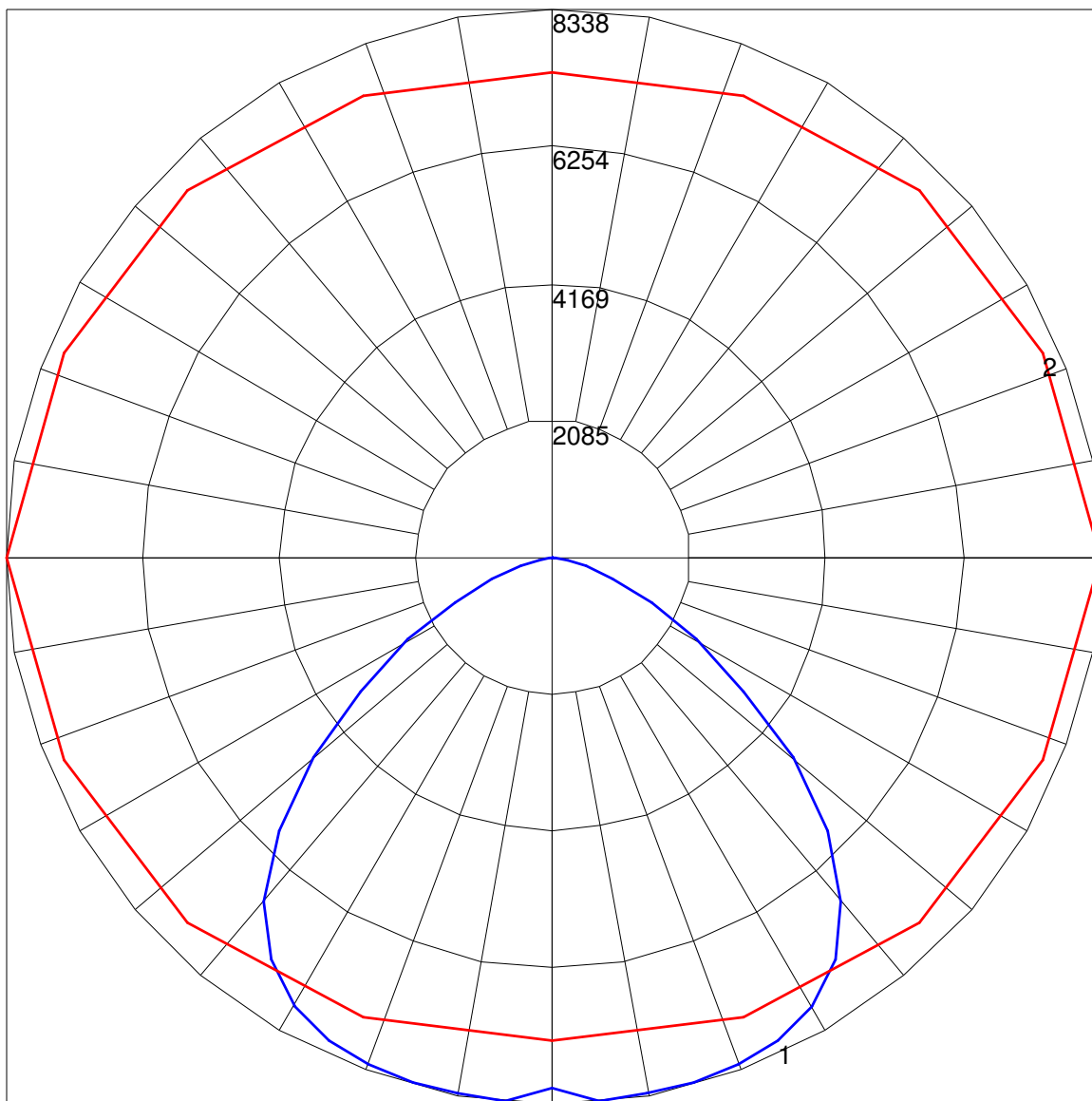
4H	2H	20.2	21.3	20.6	21.6	22.0	9.4	10.5	9.8	10.8	11.3
	3H	22.0	22.9	22.4	23.3	23.7	12.6	13.4	13.0	13.9	14.3
	4H	22.5	23.4	23.0	23.8	24.3	14.7	15.5	15.2	16.0	16.4
	6H	22.9	23.6	23.4	24.1	24.6	16.9	17.6	17.4	18.0	18.5
	8H	23.0	23.7	23.5	24.1	24.6	18.1	18.7	18.6	19.2	19.7
	12H	23.1	23.6	23.6	24.1	24.6	19.5	20.1	20.0	20.6	21.1

8H	4H	22.5	23.1	23.0	23.6	24.1	15.3	15.9	15.8	16.4	16.9
	6H	22.9	23.5	23.5	24.0	24.5	17.7	18.2	18.2	18.7	19.2
	8H	23.1	23.6	23.6	24.1	24.6	19.0	19.5	19.6	20.1	20.6
	12H	23.2	23.6	23.8	24.2	24.7	20.7	21.1	21.2	21.6	22.2

12H	4H	22.5	23.0	23.0	23.6	24.0	15.4	16.0	15.9	16.5	17.0
	6H	22.9	23.4	23.5	23.9	24.5	17.9	18.4	18.4	18.9	19.4
	8H	23.2	23.6	23.7	24.1	24.7	19.4	19.8	19.9	20.3	20.9

Maximum UGR = 24.8

POLAR GRAPH



Maximum Candela = 8338.287 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.)