

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : GA-4-L90-840-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] 8 AUG, 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-L90-840-N-DIM-UNV  
[LAMPCAT] HLM 80 CRI 4000K 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	8932
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
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	63209	6072	3856
55	46965	2924	2583
65	29163	2363	2363
75	14647	3375	3984
85	3661	6818	7801

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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	8617.300	8617.300	8617.300	8617.300	8617.300
5	8870.695	8606.121	8380.673	8088.151	7844.072
10	8844.610	8371.357	7700.605	7000.042	6595.728
15	8818.525	7970.769	6549.148	5447.997	4952.385
20	8760.766	7214.310	4984.060	3636.966	3223.336
25	8643.385	6221.225	3404.066	2192.986	1865.063
30	8408.621	4931.890	1969.402	1220.396	1071.340
35	7985.675	3670.504	1164.500	767.638	708.016
40	7279.522	2383.033	795.586	579.455	512.380
45	6282.710	1555.772	637.214	469.526	411.767
50	5088.399	1099.288	491.885	372.640	326.060
55	3799.065	870.114	255.258	244.079	231.037
60	2703.503	497.474	171.414	175.141	180.730
65	1747.682	258.985	158.372	167.688	163.962
70	1045.255	201.226	150.919	173.278	173.278
75	544.054	175.141	150.919	188.183	188.183
80	231.037	158.372	158.372	171.414	173.278
85	48.443	139.740	143.466	177.004	184.457
90	7.453	57.759	63.349	100.613	109.929
95	3.726	1.863	13.042	65.212	68.938
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	2635.18	N.A.	29.50
0-30	4602.2	N.A.	51.50
0-40	6176.23	N.A.	69.10
0-60	8113.85	N.A.	90.80
0-80	8752.54	N.A.	98.00
0-90	8897.28	N.A.	99.60
10-90	8119.97	N.A.	90.90
20-40	3541.05	N.A.	39.60
20-50	4713.09	N.A.	52.80
40-70	2339.57	N.A.	26.20
60-80	638.70	N.A.	7.20
70-80	236.74	N.A.	2.70
80-90	144.74	N.A.	1.60
90-110	35.08	N.A.	0.40
90-120	35.08	N.A.	0.40
90-130	35.08	N.A.	0.40
90-150	35.08	N.A.	0.40
90-180	35.08	N.A.	0.40
110-180	0.00	N.A.	0.00
0-180	8932.36	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	777.31
10-20	1857.87
20-30	1967.02
30-40	1574.03
40-50	1172.04
50-60	765.57
60-70	401.96
70-80	236.74
80-90	144.74
90-100	35.08
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	193	193	193	193	189	189	189	189	180	180	180	172	172	172	165	165	165	162
1	180	174	169	164	176	171	166	161	164	160	156	158	154	152	152	149	147	144
2	169	158	150	142	165	155	147	141	150	143	137	144	139	134	140	135	131	128
3	157	144	134	126	154	142	132	124	137	129	122	133	126	120	129	123	118	115
4	147	132	121	112	144	130	119	111	126	117	110	123	115	108	119	113	107	104
5	138	122	110	101	135	120	109	101	117	107	100	114	105	99	111	104	98	95
6	130	112	101	92	127	111	100	92	108	98	91	106	97	90	103	96	90	87
7	122	104	93	85	120	103	92	84	101	91	84	99	90	83	97	89	83	80
8	116	97	86	78	113	96	86	78	94	85	78	93	84	77	91	83	77	74
9	110	91	80	73	107	90	80	72	89	79	72	87	78	72	85	77	71	69
10	104	86	75	68	102	85	75	68	83	74	67	82	73	67	81	73	67	64

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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	19.0	20.3	19.4	20.6	21.0	7.4	8.7	7.8	9.1	9.4
	3H	20.8	21.9	21.2	22.3	22.7	10.2	11.3	10.6	11.7	12.1
	4H	21.3	22.4	21.7	22.7	23.2	12.1	13.2	12.5	13.6	14.0
	6H	21.6	22.6	22.0	23.0	23.4	14.0	15.0	14.5	15.4	15.9
	8H	21.6	22.6	22.1	23.0	23.4	15.1	16.1	15.6	16.5	16.9
	12H	21.6	22.5	22.1	22.9	23.4	16.4	17.3	16.9	17.7	18.2

UGR Viewed Endwise

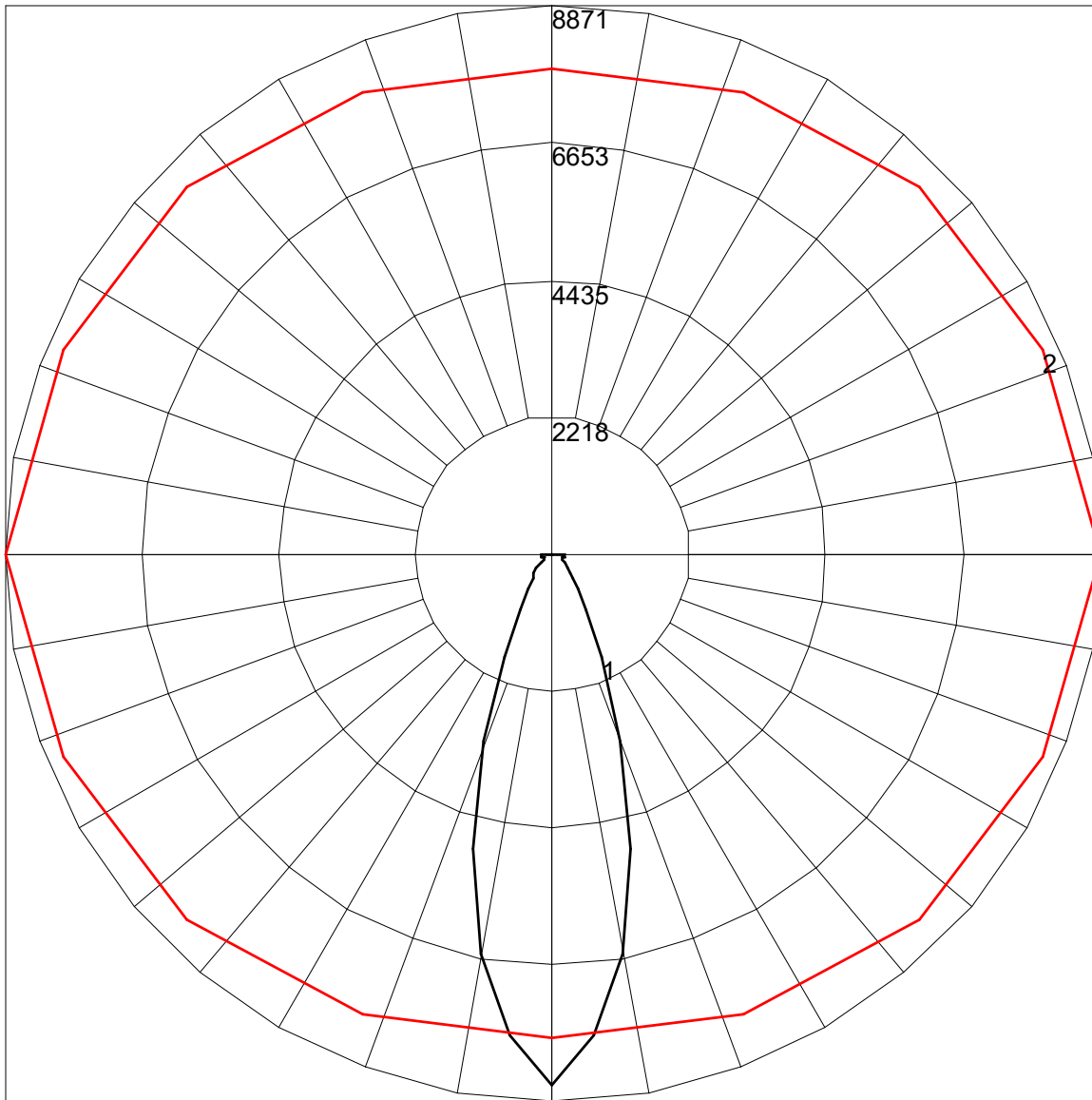
4H	2H	18.8	19.9	19.2	20.2	20.6	8.0	9.1	8.4	9.4	9.9
	3H	20.6	21.5	21.0	21.9	22.3	11.2	12.0	11.6	12.5	12.9
	4H	21.1	22.0	21.6	22.4	22.9	13.3	14.1	13.8	14.6	15.0
	6H	21.5	22.2	22.0	22.7	23.2	15.5	16.2	16.0	16.6	17.1
	8H	21.6	22.3	22.1	22.7	23.2	16.7	17.3	17.2	17.8	18.3
	12H	21.7	22.2	22.2	22.7	23.2	18.1	18.7	18.6	19.2	19.7

8H	4H	21.1	21.7	21.6	22.2	22.7	13.9	14.5	14.4	15.0	15.5
	6H	21.6	22.1	22.1	22.6	23.1	16.3	16.8	16.8	17.3	17.8
	8H	21.7	22.2	22.2	22.7	23.2	17.6	18.1	18.2	18.7	19.2
	12H	21.8	22.2	22.4	22.8	23.3	19.3	19.7	19.8	20.2	20.8

12H	4H	21.1	21.6	21.6	22.2	22.6	14.0	14.6	14.5	15.1	15.6
	6H	21.5	22.0	22.1	22.5	23.1	16.5	17.0	17.0	17.5	18.0
	8H	21.8	22.2	22.3	22.7	23.3	18.0	18.4	18.5	18.9	19.5

Maximum UGR = 23.4

POLAR GRAPH



Maximum Candela = 8870.695 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)