



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GA-4-L35-840-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  
 [ISSUEDATE] 2023-05-11  
 [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-L35-840-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	3505
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	25.6
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	24803	2383	1513
55	18429	1147	1014
65	11443	927	927
75	5747	1324	1563
85	1436	2676	3061

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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	3381.441	3381.441	3381.441	3381.441	3381.441
5	3480.873	3377.054	3288.588	3173.802	3078.025
10	3470.638	3284.933	3021.729	2746.827	2588.173
15	3460.402	3127.741	2569.895	2137.802	1943.323
20	3437.737	2830.906	1955.752	1427.151	1264.842
25	3391.676	2441.217	1335.760	860.531	731.853
30	3299.555	1935.281	772.796	478.885	420.395
35	3133.590	1440.311	456.951	301.222	277.826
40	2856.495	935.105	312.189	227.379	201.059
45	2465.344	610.487	250.044	184.243	161.578
50	1996.695	431.362	193.016	146.224	127.946
55	1490.758	341.434	100.164	95.777	90.659
60	1060.858	195.210	67.263	68.725	70.919
65	685.793	101.626	62.145	65.801	64.339
70	410.160	78.961	59.221	67.994	67.994
75	213.488	68.725	59.221	73.843	73.843
80	90.659	62.145	62.145	67.263	67.994
85	19.009	54.834	56.296	69.457	72.381
90	2.924	22.665	24.858	39.481	43.136
95	1.462	0.731	5.118	25.589	27.052
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	1034.05	N.A.	29.50
0-30	1805.91	N.A.	51.50
0-40	2423.56	N.A.	69.10
0-60	3183.88	N.A.	90.80
0-80	3434.51	N.A.	98.00
0-90	3491.3	N.A.	99.60
10-90	3186.29	N.A.	90.90
20-40	1389.51	N.A.	39.60
20-50	1849.42	N.A.	52.80
40-70	918.05	N.A.	26.20
60-80	250.63	N.A.	7.20
70-80	92.90	N.A.	2.70
80-90	56.79	N.A.	1.60
90-110	13.76	N.A.	0.40
90-120	13.76	N.A.	0.40
90-130	13.76	N.A.	0.40
90-150	13.76	N.A.	0.40
90-180	13.76	N.A.	0.40
110-180	0.00	N.A.	0.00
0-180	3505.07	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	305.02
10-20	729.03
20-30	771.86
30-40	617.65
40-50	459.91
50-60	300.41
60-70	157.73
70-80	92.90
80-90	56.79
90-100	13.76
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	17.4	18.7	17.8	19.0	19.4
	3H	19.2	20.3	19.6	20.7	21.1
	4H	19.7	20.8	20.1	21.1	21.6
	6H	20.0	21.0	20.4	21.4	21.8
	8H	20.0	21.0	20.5	21.4	21.8
	12H	20.0	20.9	20.5	21.3	21.8

UGR Viewed Endwise

5.8	7.1	6.2	7.5	7.8
8.6	9.7	9.0	10.1	10.5
10.5	11.6	10.9	12.0	12.4
12.4	13.4	12.9	13.8	14.3
13.5	14.5	14.0	14.9	15.3
14.8	15.7	15.3	16.1	16.6

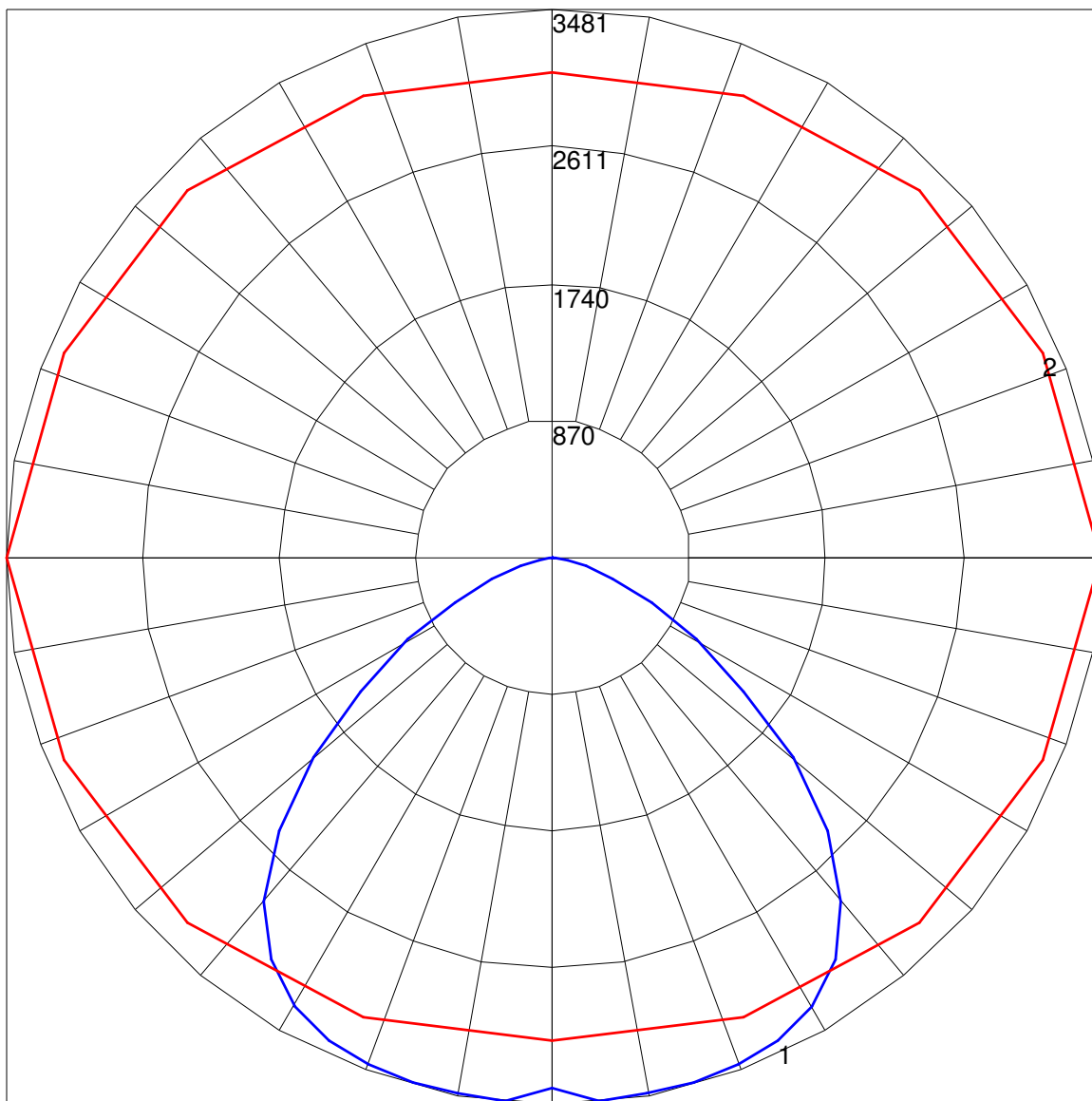
4H	2H	17.2	18.3	17.6	18.6	19.0	6.4	7.5	6.8	7.8	8.3
	3H	19.0	19.9	19.4	20.3	20.7	9.6	10.4	10.0	10.9	11.3
	4H	19.5	20.4	20.0	20.8	21.3	11.7	12.5	12.2	13.0	13.4
	6H	19.9	20.6	20.4	21.1	21.6	13.9	14.6	14.4	15.0	15.5
	8H	20.0	20.7	20.5	21.1	21.6	15.1	15.7	15.6	16.2	16.7
	12H	20.1	20.6	20.6	21.1	21.6	16.5	17.1	17.0	17.6	18.1

8H	4H	19.5	20.1	20.0	20.6	21.1	12.3	12.9	12.8	13.4	13.9
	6H	19.9	20.5	20.5	21.0	21.5	14.7	15.2	15.2	15.7	16.2
	8H	20.1	20.6	20.6	21.1	21.6	16.0	16.5	16.6	17.1	17.6
	12H	20.2	20.6	20.8	21.2	21.7	17.7	18.1	18.2	18.6	19.2

12H	4H	19.5	20.0	20.0	20.5	21.0	12.4	13.0	12.9	13.5	14.0
	6H	19.9	20.4	20.5	20.9	21.5	14.9	15.4	15.4	15.9	16.4
	8H	20.2	20.6	20.7	21.1	21.7	16.4	16.8	16.9	17.3	17.9

Maximum UGR = 21.8

POLAR GRAPH



Maximum Candela = 3480.873 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.)