

IES INDOOR REPORT

PHOTOMETRIC FILENAME : GA-4-L90-850-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-L90-850-N-DIM-UNV
[LAMPCAT] HLM 80 CRI 5000K 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	9200
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
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	65104	6254	3972
55	48373	3011	2660
65	30037	2433	2433
75	15086	3476	4103
85	3770	7023	8035

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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	8875.639	8875.639	8875.639	8875.639	8875.639
5	9136.630	8864.124	8631.918	8330.626	8079.230
10	9109.764	8622.323	7931.463	7209.897	6793.462
15	9082.897	8209.726	6745.485	5611.323	5100.854
20	9023.406	7430.589	5133.478	3745.999	3319.969
25	8902.505	6407.731	3506.117	2258.730	1920.976
30	8660.704	5079.744	2028.443	1256.982	1103.458
35	8225.078	3780.542	1199.411	790.651	729.242
40	7497.756	2454.474	819.437	596.827	527.741
45	6471.060	1602.413	656.317	483.602	424.112
50	5240.945	1132.244	506.631	383.811	335.835
55	3912.957	896.200	262.911	251.396	237.963
60	2784.552	512.388	176.553	180.391	186.149
65	1800.075	266.749	163.120	172.715	168.877
70	1076.591	207.258	155.444	178.472	178.472
75	560.365	180.391	155.444	193.825	193.825
80	237.963	163.120	163.120	176.553	178.472
85	49.895	143.929	147.767	182.310	189.987
90	7.676	59.491	65.248	103.629	113.224
95	3.838	1.919	13.433	67.167	71.005
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	2714.18	N.A.	29.50
0-30	4740.17	N.A.	51.50
0-40	6361.39	N.A.	69.10
0-60	8357.09	N.A.	90.80
0-80	9014.94	N.A.	98.00
0-90	9164.01	N.A.	99.60
10-90	8363.4	N.A.	90.90
20-40	3647.21	N.A.	39.60
20-50	4854.38	N.A.	52.80
40-70	2409.71	N.A.	26.20
60-80	657.85	N.A.	7.20
70-80	243.84	N.A.	2.70
80-90	149.07	N.A.	1.60
90-110	36.13	N.A.	0.40
90-120	36.13	N.A.	0.40
90-130	36.13	N.A.	0.40
90-150	36.13	N.A.	0.40
90-180	36.13	N.A.	0.40
110-180	0.00	N.A.	0.00
0-180	9200.14	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	800.62
10-20	1913.57
20-30	2025.99
30-40	1621.22
40-50	1207.18
50-60	788.53
60-70	414.01
70-80	243.84
80-90	149.07
90-100	36.13
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	20.8	22.1	21.2	22.4	22.8	9.2	10.5	9.6	10.9	11.2
	3H	22.6	23.7	23.0	24.1	24.5	12.0	13.1	12.4	13.5	13.9
	4H	23.1	24.2	23.5	24.5	25.0	13.9	15.0	14.3	15.4	15.8
	6H	23.4	24.4	23.8	24.8	25.2	15.8	16.8	16.3	17.2	17.7
	8H	23.4	24.4	23.9	24.8	25.2	16.9	17.9	17.4	18.3	18.7
	12H	23.4	24.3	23.9	24.7	25.2	18.2	19.1	18.7	19.5	20.0

UGR Viewed Endwise

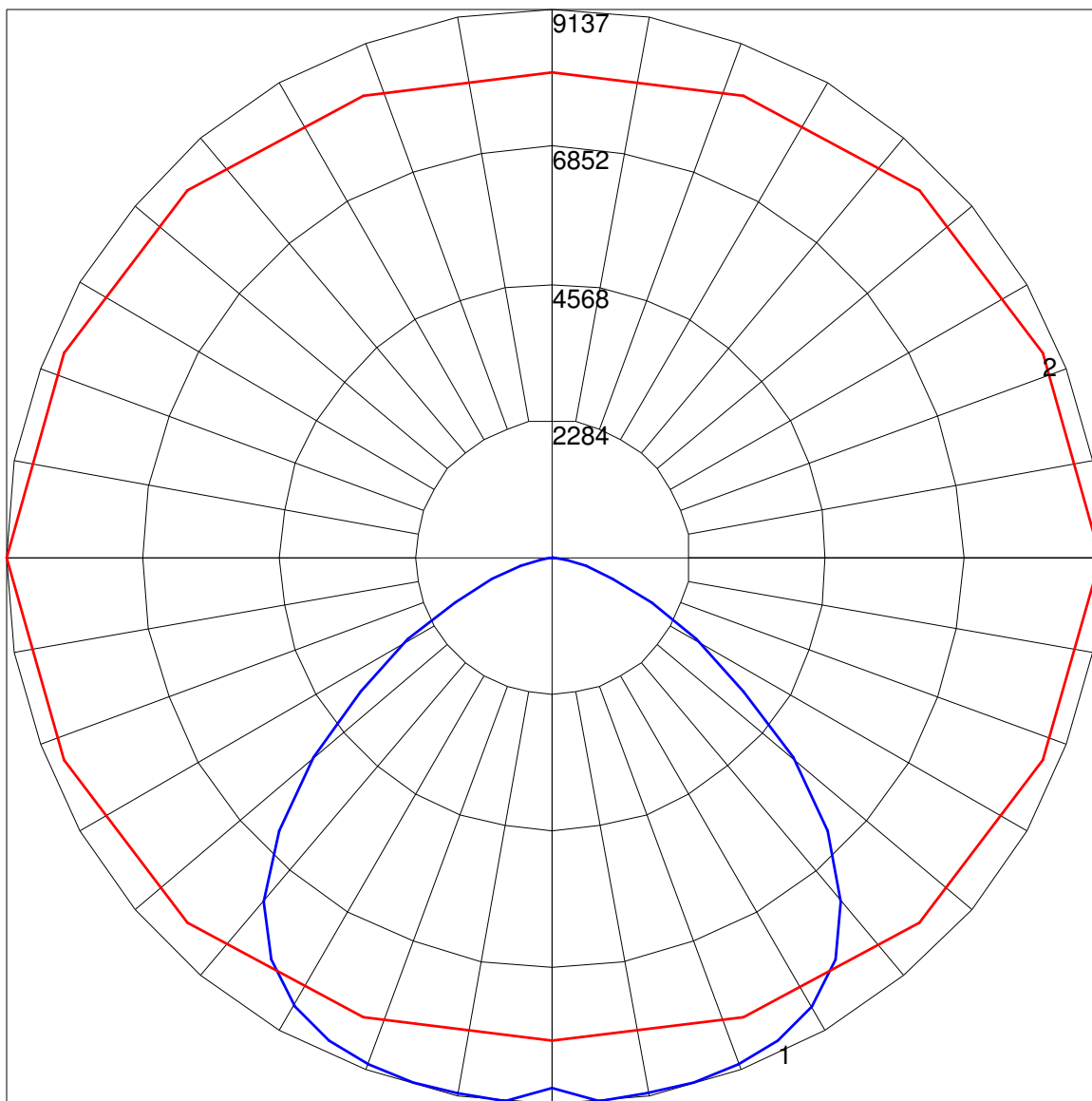
4H	2H	20.6	21.7	21.0	22.0	22.4	9.8	10.9	10.2	11.2	11.7
	3H	22.4	23.3	22.8	23.7	24.1	13.0	13.8	13.4	14.3	14.7
	4H	22.9	23.8	23.4	24.2	24.7	15.1	15.9	15.6	16.4	16.8
	6H	23.3	24.0	23.8	24.5	25.0	17.3	18.0	17.8	18.4	18.9
	8H	23.4	24.1	23.9	24.5	25.0	18.5	19.1	19.0	19.6	20.1
	12H	23.5	24.0	24.0	24.5	25.0	19.9	20.5	20.4	21.0	21.5

8H	4H	22.9	23.5	23.4	24.0	24.5	15.7	16.3	16.2	16.8	17.3
	6H	23.3	23.9	23.9	24.4	24.9	18.1	18.6	18.6	19.1	19.6
	8H	23.5	24.0	24.0	24.5	25.0	19.4	19.9	20.0	20.5	21.0
	12H	23.6	24.0	24.2	24.6	25.1	21.1	21.5	21.6	22.0	22.6

12H	4H	22.9	23.4	23.4	23.9	24.4	15.8	16.4	16.3	16.9	17.4
	6H	23.3	23.8	23.9	24.3	24.9	18.3	18.8	18.8	19.2	19.8
	8H	23.6	24.0	24.1	24.5	25.1	19.8	20.2	20.3	20.7	21.3

Maximum UGR = 25.2

POLAR GRAPH



Maximum Candela = 9136.63 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.)