



IES INDOOR REPORT
PHOTOMETRIC FILENAME : GA-4-L35-850-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
[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-L35-850-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	3610
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
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	25548	2454	1559
55	18982	1182	1044
65	11787	955	955
75	5920	1364	1610
85	1479	2756	3153

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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	3482.883	3482.883	3482.883	3482.883	3482.883
5	3585.299	3478.365	3387.245	3269.016	3170.365
10	3574.756	3383.480	3112.380	2829.231	2665.818
15	3564.213	3221.573	2646.991	2201.935	2001.623
20	3540.869	2915.832	2014.424	1469.965	1302.787
25	3493.426	2514.454	1375.833	886.347	753.809
30	3398.541	1993.339	795.980	493.252	433.007
35	3227.597	1483.520	470.660	310.259	286.161
40	2942.189	963.158	321.555	234.200	207.090
45	2539.304	628.802	257.545	189.770	166.425
50	2056.596	444.303	198.807	150.611	131.785
55	1535.481	351.677	103.169	98.650	93.379
60	1092.684	201.066	69.281	70.787	73.046
65	706.366	104.675	64.010	67.775	66.269
70	422.464	81.330	60.998	70.034	70.034
75	219.892	70.787	60.998	76.059	76.059
80	93.379	64.010	64.010	69.281	70.034
85	19.579	56.479	57.985	71.540	74.553
90	3.012	23.345	25.604	40.665	44.430
95	1.506	0.753	5.271	26.357	27.863
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	1065.07	N.A.	29.50
0-30	1860.09	N.A.	51.50
0-40	2496.27	N.A.	69.10
0-60	3279.4	N.A.	90.80
0-80	3537.55	N.A.	98.00
0-90	3596.04	N.A.	99.60
10-90	3281.87	N.A.	90.90
20-40	1431.2	N.A.	39.60
20-50	1904.91	N.A.	52.80
40-70	945.59	N.A.	26.20
60-80	258.14	N.A.	7.20
70-80	95.69	N.A.	2.70
80-90	58.50	N.A.	1.60
90-110	14.18	N.A.	0.40
90-120	14.18	N.A.	0.40
90-130	14.18	N.A.	0.40
90-150	14.18	N.A.	0.40
90-180	14.18	N.A.	0.40
110-180	0.00	N.A.	0.00
0-180	3610.22	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	314.17
10-20	750.90
20-30	795.02
30-40	636.18
40-50	473.71
50-60	309.42
60-70	162.46
70-80	95.69
80-90	58.50
90-100	14.18
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	54
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	17.5	18.8	17.9	19.1	19.5	5.9	7.2	6.3	7.6	7.9
	3H	19.3	20.4	19.7	20.8	21.2	8.7	9.8	9.1	10.2	10.6
	4H	19.8	20.9	20.2	21.2	21.7	10.6	11.7	11.0	12.1	12.5
	6H	20.1	21.1	20.5	21.5	21.9	12.5	13.5	13.0	13.9	14.4
	8H	20.1	21.1	20.6	21.5	21.9	13.6	14.6	14.1	15.0	15.4
	12H	20.1	21.0	20.6	21.4	21.9	14.9	15.8	15.4	16.2	16.7

UGR Viewed Endwise

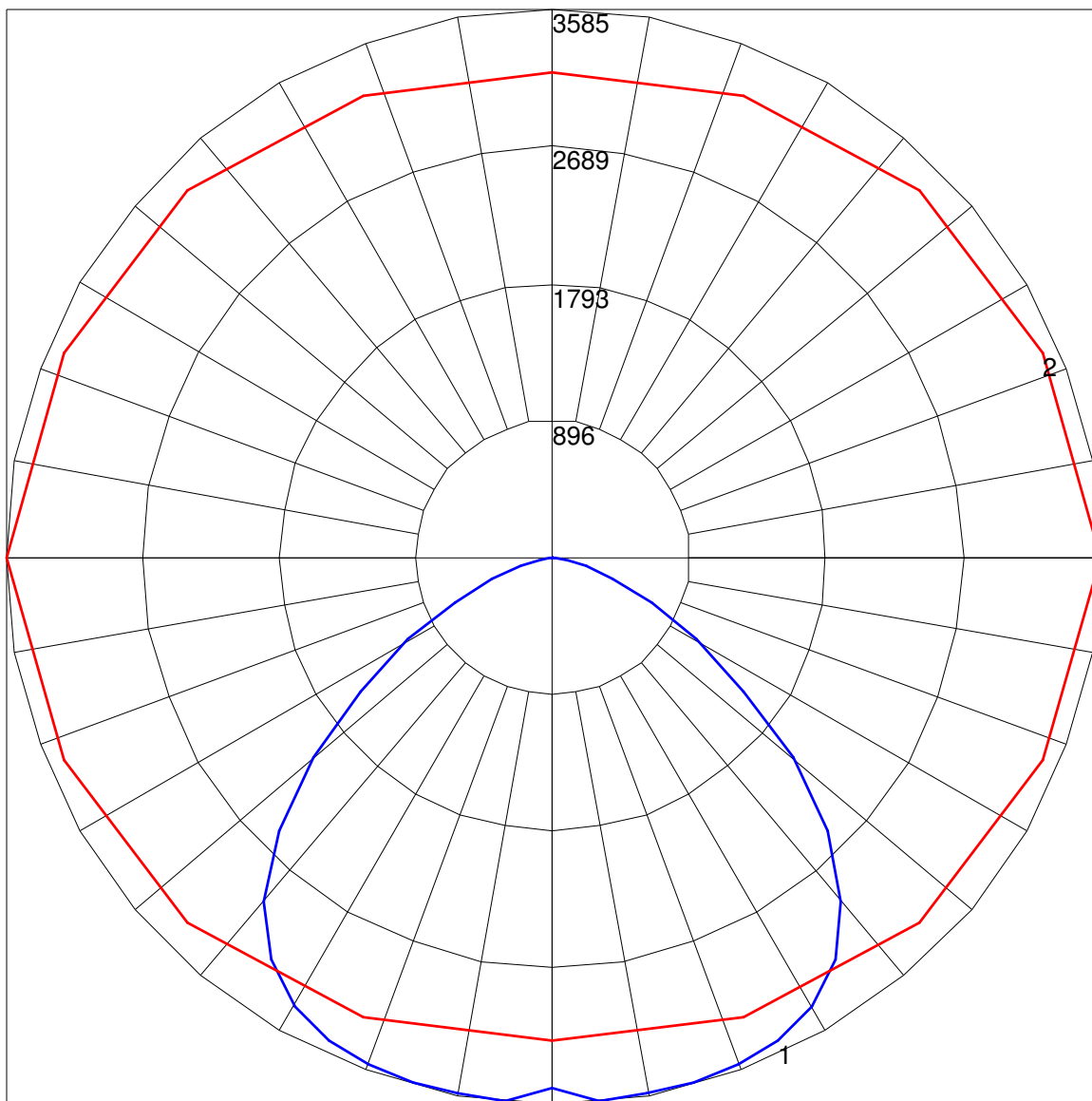
4H	2H	17.3	18.4	17.7	18.7	19.1	6.5	7.6	6.9	7.9	8.3
	3H	19.1	20.0	19.5	20.4	20.8	9.7	10.5	10.1	11.0	11.4
	4H	19.6	20.5	20.1	20.9	21.4	11.8	12.6	12.3	13.1	13.5
	6H	20.0	20.7	20.5	21.2	21.7	14.0	14.7	14.5	15.1	15.6
	8H	20.1	20.8	20.6	21.2	21.7	15.2	15.8	15.7	16.3	16.8
	12H	20.2	20.7	20.7	21.2	21.7	16.6	17.2	17.1	17.7	18.2

8H	4H	19.6	20.2	20.1	20.7	21.2	12.4	13.0	12.9	13.5	14.0
	6H	20.0	20.6	20.6	21.1	21.6	14.8	15.3	15.3	15.8	16.3
	8H	20.2	20.7	20.7	21.2	21.7	16.1	16.6	16.7	17.2	17.7
	12H	20.3	20.7	20.9	21.3	21.8	17.8	18.2	18.3	18.7	19.3

12H	4H	19.6	20.1	20.1	20.6	21.1	12.5	13.1	13.0	13.6	14.1
	6H	20.0	20.5	20.6	21.0	21.6	15.0	15.5	15.5	15.9	16.5
	8H	20.3	20.7	20.8	21.2	21.8	16.5	16.9	17.0	17.4	18.0

Maximum UGR = 21.9

POLAR GRAPH



Maximum Candela = 3585.299 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.)