



IES INDOOR REPORT

PHOTOMETRIC FILENAME : GA-4-L35-835-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] 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-L35-835-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	3400
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
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	24059	2311	1468
55	17876	1113	983
65	11100	899	899
75	5575	1285	1516
85	1393	2595	2969

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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	3279.997	3279.997	3279.997	3279.997	3279.997
5	3376.447	3275.742	3189.930	3078.588	2985.684
10	3366.518	3186.384	2931.076	2664.421	2510.528
15	3356.590	3033.909	2492.798	2073.667	1885.023
20	3334.605	2745.978	1897.079	1384.336	1226.896
25	3289.926	2367.981	1295.688	834.715	709.898
30	3200.568	1877.222	749.612	464.519	407.783
35	3039.582	1397.102	443.243	292.186	269.492
40	2770.800	907.052	302.824	220.558	195.027
45	2391.384	592.172	242.542	178.716	156.731
50	1936.794	418.421	187.226	141.838	124.108
55	1446.036	331.191	97.159	92.904	87.939
60	1029.033	189.353	65.245	66.664	68.791
65	665.219	98.577	60.281	63.827	62.409
70	397.855	76.592	57.444	65.955	65.955
75	207.083	66.664	57.444	71.628	71.628
80	87.939	60.281	60.281	65.245	65.955
85	18.439	53.189	54.608	67.373	70.210
90	2.837	21.985	24.112	38.296	41.842
95	1.418	0.709	4.964	24.822	26.240
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	1003.03	N.A.	29.50
0-30	1751.73	N.A.	51.50
0-40	2350.85	N.A.	69.10
0-60	3088.37	N.A.	90.80
0-80	3331.48	N.A.	98.00
0-90	3386.57	N.A.	99.60
10-90	3090.7	N.A.	90.90
20-40	1347.83	N.A.	39.60
20-50	1793.94	N.A.	52.80
40-70	890.51	N.A.	26.20
60-80	243.11	N.A.	7.20
70-80	90.11	N.A.	2.70
80-90	55.09	N.A.	1.60
90-110	13.35	N.A.	0.40
90-120	13.35	N.A.	0.40
90-130	13.35	N.A.	0.40
90-150	13.35	N.A.	0.40
90-180	13.35	N.A.	0.40
110-180	0.00	N.A.	0.00
0-180	3399.92	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	295.87
10-20	707.16
20-30	748.71
30-40	599.12
40-50	446.11
50-60	291.40
60-70	153.00
70-80	90.11
80-90	55.09
90-100	13.35
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	17.3	18.6	17.7	18.9	19.3	5.7	7.0	6.1	7.4	7.7
	3H	19.1	20.2	19.5	20.6	21.0	8.5	9.6	8.9	10.0	10.4
	4H	19.6	20.7	20.0	21.0	21.5	10.4	11.5	10.8	11.9	12.3
	6H	19.9	20.9	20.3	21.3	21.7	12.3	13.3	12.8	13.7	14.2
	8H	19.9	20.9	20.4	21.3	21.7	13.4	14.4	13.9	14.8	15.2
	12H	19.9	20.8	20.4	21.2	21.7	14.7	15.6	15.2	16.0	16.5

UGR Viewed Endwise

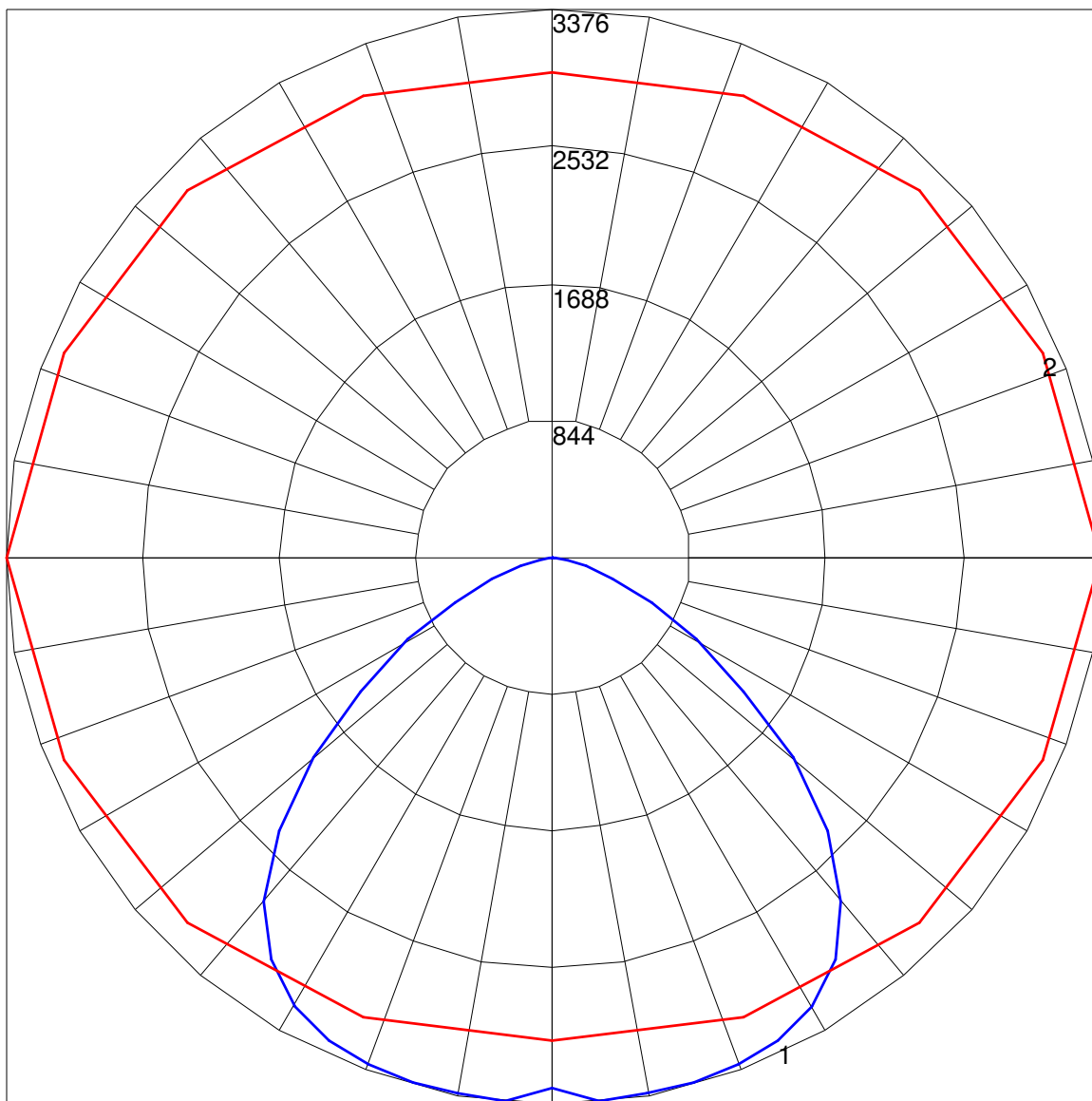
4H	2H	17.1	18.2	17.5	18.5	19.0	6.3	7.4	6.7	7.7	8.2
	3H	18.9	19.8	19.3	20.2	20.6	9.5	10.3	9.9	10.8	11.2
	4H	19.4	20.3	19.9	20.7	21.2	11.6	12.4	12.1	12.9	13.3
	6H	19.8	20.5	20.3	21.0	21.5	13.8	14.5	14.3	14.9	15.4
	8H	19.9	20.6	20.4	21.0	21.5	15.0	15.6	15.5	16.1	16.6
	12H	20.0	20.5	20.5	21.0	21.5	16.4	17.0	16.9	17.5	18.0

8H	4H	19.4	20.0	19.9	20.5	21.0	12.2	12.8	12.7	13.3	13.8
	6H	19.9	20.4	20.4	20.9	21.4	14.6	15.1	15.1	15.6	16.1
	8H	20.0	20.5	20.5	21.0	21.5	15.9	16.4	16.5	17.0	17.5
	12H	20.1	20.5	20.7	21.1	21.7	17.6	18.0	18.1	18.5	19.1

12H	4H	19.4	19.9	19.9	20.5	20.9	12.3	12.9	12.8	13.4	13.9
	6H	19.8	20.3	20.4	20.8	21.4	14.8	15.3	15.3	15.8	16.3
	8H	20.1	20.5	20.6	21.0	21.6	16.3	16.7	16.8	17.2	17.8

Maximum UGR = 21.7

POLAR GRAPH



Maximum Candela = 3376.447 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.)