



IES INDOOR REPORT

PHOTOMETRIC FILENAME : GA-4-L35-830-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-L35-830-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	3365
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	131
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	23811	2287	1453
55	17692	1101	973
65	10986	890	890
75	5517	1271	1501
85	1379	2569	2939

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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	3246.183	3246.183	3246.183	3246.183	3246.183
5	3341.638	3241.972	3157.045	3046.850	2954.904
10	3331.812	3153.535	2900.859	2636.953	2484.646
15	3321.986	3002.632	2467.099	2052.290	1865.590
20	3300.228	2717.669	1877.522	1370.065	1214.248
25	3256.009	2343.569	1282.330	826.110	702.579
30	3167.573	1857.870	741.884	459.730	403.580
35	3008.247	1382.699	438.673	289.173	266.713
40	2742.235	897.701	299.702	218.284	193.016
45	2366.731	586.068	240.042	176.873	155.115
50	1916.827	414.108	185.296	140.375	122.829
55	1431.128	327.777	96.157	91.946	87.033
60	1018.424	187.401	64.573	65.976	68.082
65	658.361	97.561	59.660	63.169	61.765
70	393.753	75.803	56.852	65.275	65.275
75	204.948	65.976	56.852	70.890	70.890
80	87.033	59.660	59.660	64.573	65.275
85	18.249	52.641	54.045	66.678	69.486
90	2.808	21.758	23.864	37.901	41.411
95	1.404	0.702	4.913	24.566	25.969
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	992.69	N.A.	29.50
0-30	1733.67	N.A.	51.50
0-40	2326.62	N.A.	69.10
0-60	3056.53	N.A.	90.80
0-80	3297.13	N.A.	98.00
0-90	3351.65	N.A.	99.60
10-90	3058.84	N.A.	90.90
20-40	1333.93	N.A.	39.60
20-50	1775.45	N.A.	52.80
40-70	881.33	N.A.	26.20
60-80	240.60	N.A.	7.20
70-80	89.18	N.A.	2.70
80-90	54.52	N.A.	1.60
90-110	13.21	N.A.	0.40
90-120	13.21	N.A.	0.40
90-130	13.21	N.A.	0.40
90-150	13.21	N.A.	0.40
90-180	13.21	N.A.	0.40
110-180	0.00	N.A.	0.00
0-180	3364.87	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	292.82
10-20	699.87
20-30	740.99
30-40	592.95
40-50	441.51
50-60	288.40
60-70	151.42
70-80	89.18
80-90	54.52
90-100	13.21
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

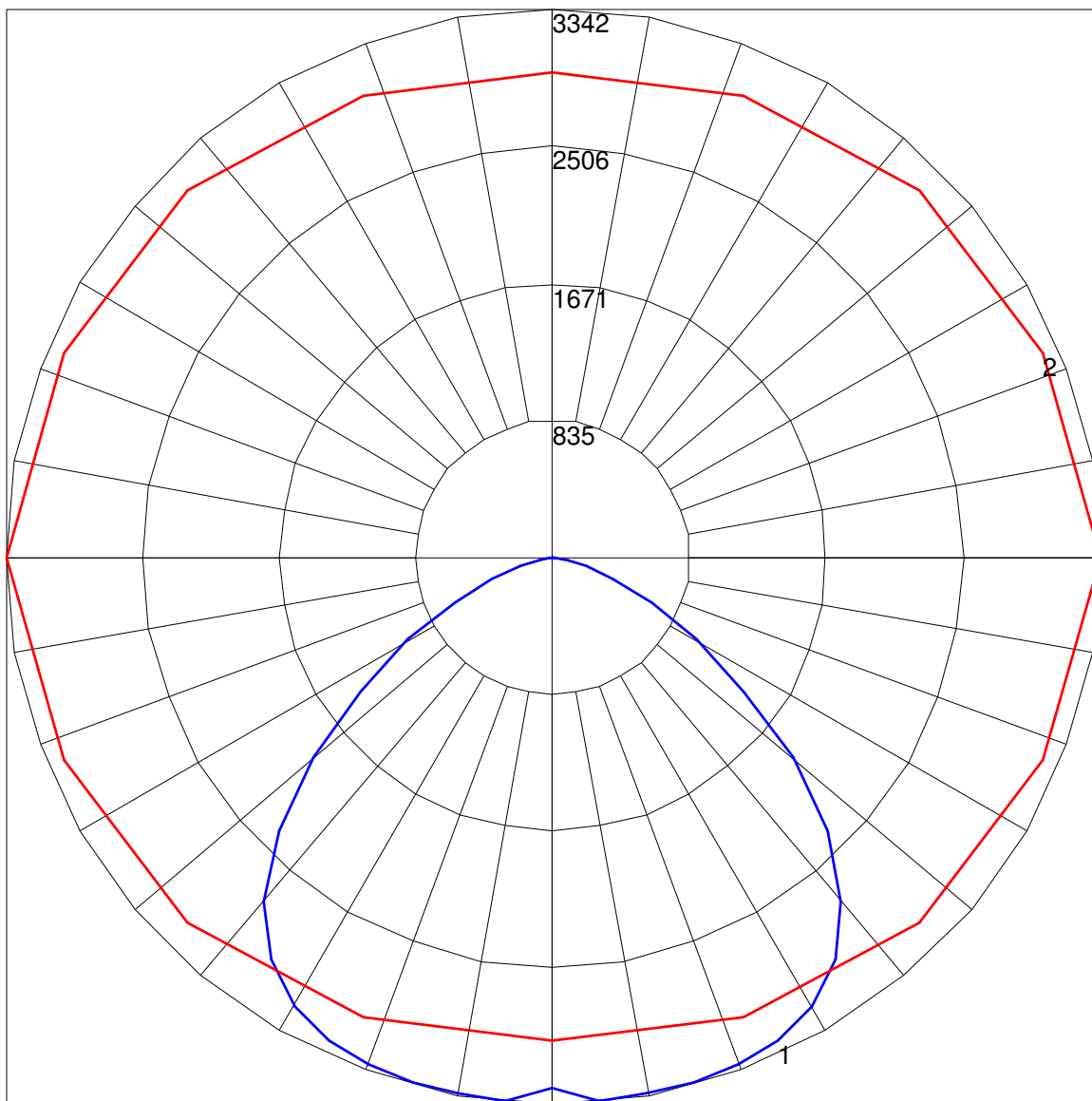
X=2H	Y=2H	17.3	18.6	17.7	18.9	19.3	5.7	7.0	6.1	7.4	7.7
	3H	19.1	20.2	19.5	20.6	21.0	8.5	9.6	8.9	10.0	10.4
	4H	19.6	20.7	20.0	21.0	21.5	10.4	11.5	10.8	11.9	12.3
	6H	19.9	20.9	20.3	21.3	21.7	12.3	13.3	12.8	13.7	14.2
	8H	19.9	20.9	20.4	21.3	21.7	13.4	14.4	13.9	14.8	15.2
	12H	19.9	20.8	20.4	21.2	21.7	14.7	15.6	15.2	16.0	16.5

UGR Viewed Endwise

4H	2H	17.1	18.2	17.5	18.5	18.9	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	19.8	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	21.6	17.6	18.0	18.1	18.5	19.1
12H	4H	19.4	19.9	19.9	20.4	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 = 3341.638 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.)