H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GA-4-L55-850-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-L55-850-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	5667
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	151
Total Luminaire Watts	37.5
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	40103	3853	2446
55	29797	1855	1639
65	18502	1499	1499
75	9293	2141	2527
85	2322	4326	4950

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	5467.282	5467.282	5467.282	5467.282	5467.282
5	5628.049	5460.189	5317.153	5131.561	4976.704
10	5611.500	5311.243	4885.681	4441.206	4184.687
15	5594.950	5057.088	4155.134	3456.504	3142.062
20	5558.305	4577.149	3162.158	2307.488	2045.059
25	5483.831	3947.082	2159.724	1391.349	1183.297
30	5334.885	3129.058	1249.496	774.285	679.716
35	5066.545	2328.766	738.822	487.031	449.204
40	4618.523	1511.925	504.763	367.638	325.082
45	3986.092	987.066	404.283	297.893	261.247
50	3228.356	697.448	312.078	236.423	206.870
55	2410.332	552.048	161.950	154.857	146.582
60	1715.249	315.625	108.755	111.119	114.665
65	1108.824	164.314	100.480	106.390	104.026
70	663.166	127.668	95.751	109.937	109.937
75	345.178	111.119	95.751	119.394	119.394
80	146.582	100.480	100.480	108.755	109.937
85	30.735	88.659	91.023	112.301	117.029
90	4.728	36.646	40.192	63.834	69.745
95	2.364	1.182	8.275	41.374	43.738
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	1671.9	N.A.	29.50
0-30	2919.89	N.A.	51.50
0-40	3918.53	N.A.	69.10
0-60	5147.86	N.A.	90.80
0-80	5553.09	N.A.	98.00
0-90	5644.92	N.A.	99.60
10-90	5151.75	N.A.	90.90
20-40	2246.63	N.A.	39.60
20-50	2990.24	N.A.	52.80
40-70	1484.35	N.A.	26.20
60-80	405.22	N.A.	7.20
70-80	150.20	N.A.	2.70
80-90	91.83	N.A.	1.60
90-110	22.25	N.A.	0.40
90-120	22.25	N.A.	0.40
90-130	22.25	N.A.	0.40
90-150	22.25	N.A.	0.40
90-180	22.25	N.A.	0.40
110-180	0.00	N.A.	0.00
0-180	5667.17	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	493.17
10-20	1178.73
20-30	1247.98
30-40	998.65
40-50	743.61
50-60	485.72
60-70	255.02
70-80	150.20
80-90	91.83
90-100	22.25
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					UGR Viewed Endwise				
X=2H	Y=2H	19.1	20.4	19.5	20.7	21.1	7.5	8.8	7.9	9.2	9.5
	3H	20.9	22.0	21.3	22.4	22.8	10.3	11.4	10.7	11.8	12.2
	4H	21.4	22.5	21.8	22.8	23.3	12.2	13.3	12.6	13.7	14.1
	6H	21.7	22.7	22.1	23.1	23.5	14.1	15.1	14.6	15.5	16.0
	8H	21.7	22.7	22.2	23.1	23.5	15.2	16.2	15.7	16.6	17.0
	12H	21.7	22.6	22.2	23.0	23.5	16.5	17.4	17.0	17.8	18.3
4H	2H	18.9	20.0	19.3	20.3	20.8	8.1	9.2	8.5	9.5	10.0
	3H	20.7	21.6	21.1	22.0	22.4	11.3	12.1	11.7	12.6	13.0
	4H	21.2	22.1	21.7	22.5	23.0	13.4	14.2	13.9	14.7	15.1
	6H	21.6	22.3	22.1	22.8	23.3	15.6	16.3	16.1	16.7	17.2
	8H	21.7	22.4	22.2	22.8	23.3	16.8	17.4	17.3	17.9	18.4
	12H	21.8	22.3	22.3	22.8	23.3	18.2	18.8	18.7	19.3	19.8
8H	4H	21.2	21.8	21.7	22.3	22.8	14.0	14.6	14.5	15.1	15.6
	6H	21.7	22.2	22.2	22.7	23.2	16.4	16.9	16.9	17.4	17.9
	8H	21.8	22.3	22.3	22.8	23.3	17.7	18.2	18.3	18.8	19.3
	12H	21.9	22.3	22.5	22.9	23.5	19.4	19.8	19.9	20.3	20.9
12H	4H	21.2	21.7	21.7	22.3	22.7	14.1	14.7	14.6	15.2	15.7
	6H	21.6	22.1	22.2	22.6	23.2	16.6	17.1	17.1	17.6	18.1
	8H	21.9	22.3	22.4	22.8	23.4	18.1	18.5	18.6	19.0	19.6

Maximum UGR = 23.5

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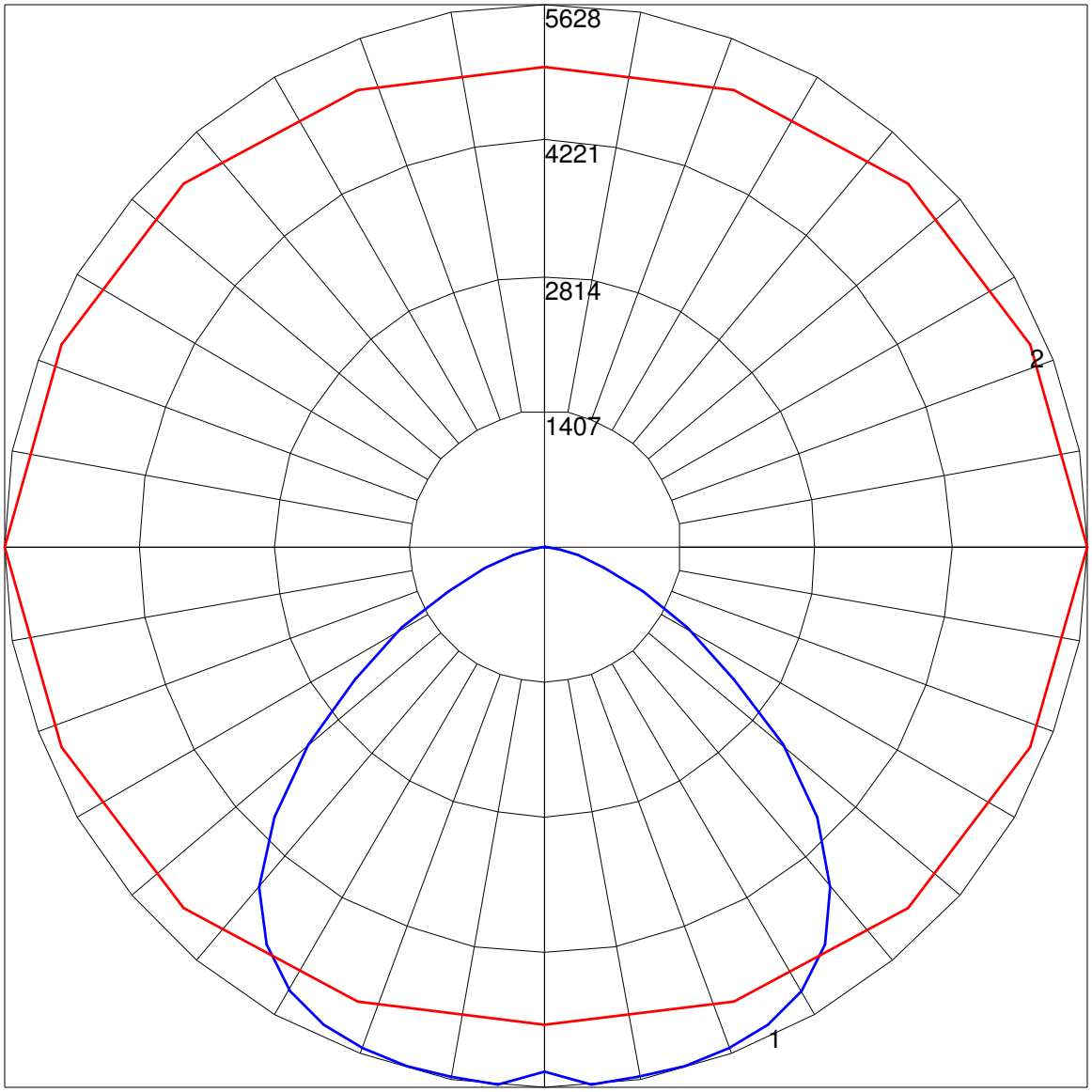
POLAR GRAPH



Maximum Candela = 5628.049 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.)