H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-935-SAF118-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19726.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-07-17
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 48 INCH LOW PROFILE LED HIGHBAY LUMINAIRE
[MORE] WHITE REFLECTOR w/.118"THK FROSTED ACRYLIC LENS
[MORE] 0-10V LED DRIVERS
[LUMCAT] GL-4-L200-935-SAF118-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Commercial, Industrial, Manufacturing, High Bay
[_SEARCH_MOUNTING] Cable, Pendant, Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	13790
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	133
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.32
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.83 ft
Luminous Width (90-270)	1.00 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	14652	13961	12154
55	13247	11326	10474
65	10431	8661	8302
75	7192	5889	5873
85	2568	2357	2552

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-935-SAF118-DIM-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	5325.103	5325.103	5325.103	5325.103	5325.103
5	5406.391	5328.638	5293.800	5266.031	5257.953
10	5360.446	5272.090	5249.369	5217.561	5210.493
15	5274.109	5187.268	5169.092	5128.195	5123.146
20	5130.720	5068.618	5041.859	4980.262	4991.874
25	4945.929	4900.994	4863.631	4791.937	4809.103
30	4718.727	4680.355	4652.081	4561.706	4549.588
35	4438.007	4380.954	4373.886	4253.721	4165.365
40	4097.709	4041.161	4002.789	3815.979	3630.683
45	3692.785	3649.364	3518.597	3254.033	3063.184
50	3227.779	3186.883	2935.446	2699.156	2593.129
55	2708.244	2651.696	2315.438	2198.303	2141.250
60	2135.696	2083.692	1771.669	1668.670	1683.312
65	1571.226	1514.173	1304.643	1234.968	1250.619
70	1087.034	983.026	907.797	855.288	865.891
75	663.429	576.083	543.265	514.486	541.750
80	315.558	272.137	256.485	250.932	266.583
85	79.773	74.219	73.209	76.239	79.268
90	0.000	0.000	0.000	0.000	0.000

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-935-SAF118-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1964.76	N.A.	14.20
0-30	4203.76	N.A.	30.50
0-40	6901.02	N.A.	50.00
0-60	11700.23	N.A.	84.80
0-80	13676.31	N.A.	99.20
0-90	13790.39	N.A.	100.00
10-90	13285.5	N.A.	96.30
20-40	4936.26	N.A.	35.80
20-50	7592.69	N.A.	55.10
40-70	6164.68	N.A.	44.70
60-80	1976.08	N.A.	14.30
70-80	610.62	N.A.	4.40
80-90	114.08	N.A.	0.80
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	13790.39	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	504.89
10-20	1459.87
20-30	2239.01
30-40	2697.25
40-50	2656.43
50-60	2142.78
60-70	1365.47
70-80	610.62
80-90	114.08
90-100	0.00
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

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-935-SAF118-DIM-UNV_.IES

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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	81	98	91	85	80	88	83	79	84	80	77	81	78	75	73
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62
4	85	73	65	59	82	72	64	58	69	63	57	67	61	57	65	60	56	54
5	78	66	57	51	76	65	57	50	63	55	50	61	54	49	59	53	49	47
6	72	59	51	45	70	58	50	44	57	49	44	55	48	44	53	48	43	41
7	67	54	45	39	65	53	45	39	52	44	39	50	44	39	49	43	38	37
8	62	49	41	35	61	49	41	35	47	40	35	46	40	35	45	39	35	33
9	58	45	37	32	57	45	37	32	44	36	32	42	36	31	41	36	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28	27

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-935-SAF118-DIM-UNV_.IES

UGR TABLE - CORRECTED

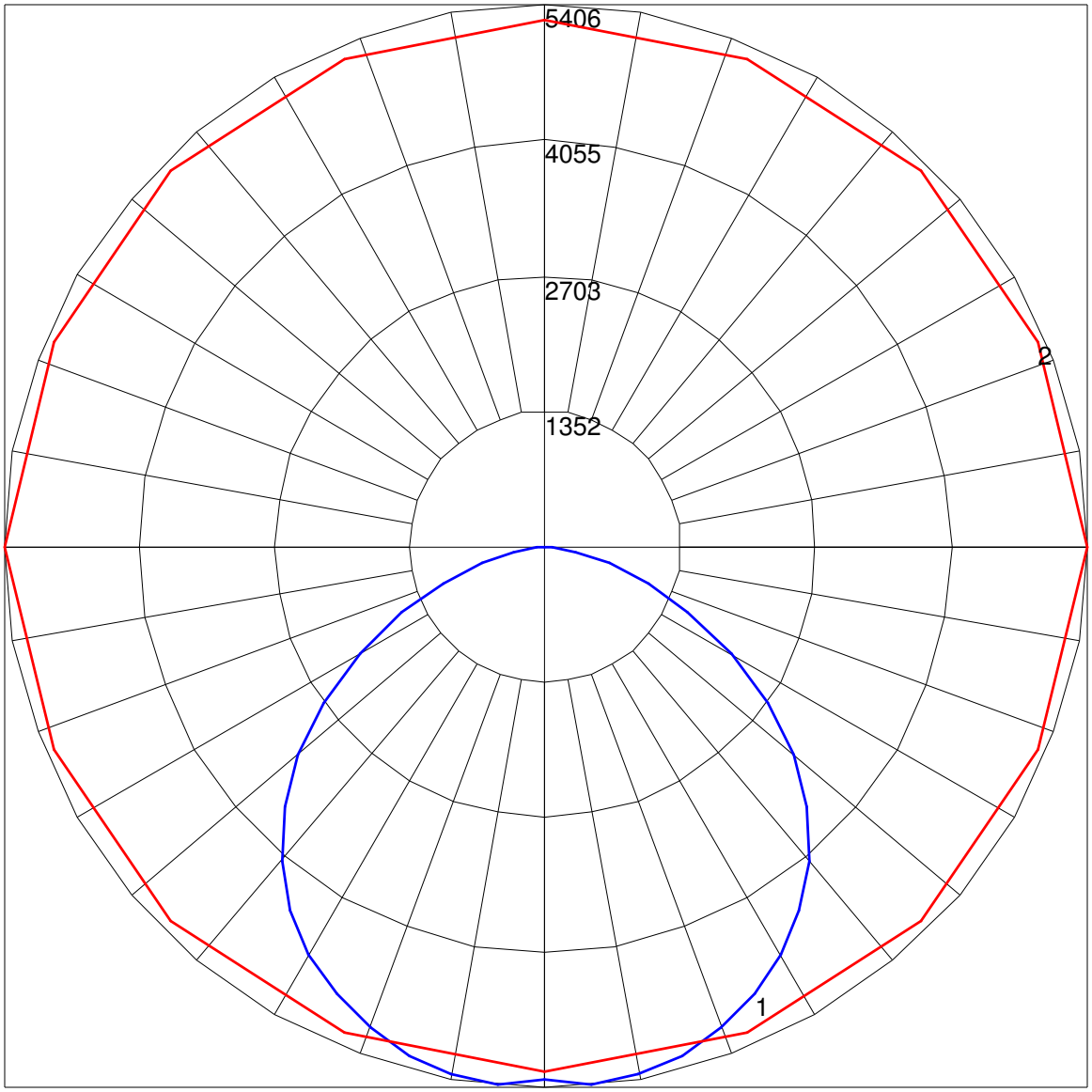
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	21.1	22.7	21.5	23.0	23.3	19.7	21.2	20.0	21.6	21.9
	3H	22.4	23.8	22.8	24.1	24.5	20.9	22.3	21.3	22.7	23.0
	4H	22.7	24.1	23.1	24.4	24.8	21.3	22.7	21.7	23.0	23.4
	6H	22.9	24.2	23.4	24.5	24.9	21.6	22.8	22.0	23.1	23.5
	8H	23.0	24.1	23.4	24.5	24.9	21.6	22.8	22.0	23.2	23.6
	12H	23.0	24.1	23.4	24.5	24.9	21.6	22.7	22.0	23.1	23.5
4H	2H	21.4	22.7	21.8	23.1	23.5	20.2	21.5	20.6	21.9	22.2
	3H	22.9	23.9	23.3	24.3	24.7	21.6	22.7	22.1	23.1	23.5
	4H	23.3	24.3	23.7	24.7	25.1	22.1	23.1	22.6	23.5	24.0
	6H	23.6	24.4	24.0	24.9	25.3	22.4	23.3	22.9	23.7	24.2
	8H	23.6	24.4	24.1	24.9	25.3	22.5	23.3	23.0	23.7	24.2
	12H	23.7	24.4	24.1	24.8	25.3	22.5	23.2	23.0	23.7	24.2
8H	4H	23.4	24.2	23.9	24.6	25.1	22.3	23.1	22.8	23.5	24.0
	6H	23.7	24.4	24.2	24.9	25.3	22.6	23.3	23.1	23.8	24.3
	8H	23.8	24.4	24.3	24.9	25.4	22.7	23.3	23.3	23.8	24.3
	12H	23.9	24.4	24.4	24.9	25.4	22.8	23.3	23.3	23.8	24.4
12H	4H	23.4	24.1	23.9	24.6	25.0	22.3	23.0	22.8	23.5	24.0
	6H	23.7	24.3	24.2	24.8	25.3	22.7	23.3	23.2	23.7	24.3
	8H	23.8	24.3	24.3	24.8	25.4	22.8	23.3	23.3	23.8	24.4

Maximum UGR = 25.4

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-935-SAF118-DIM-UNV_.IES

POLAR GRAPH



Maximum Candela = 5406.391 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.)

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.