H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L150-830-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-L150-830-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	12394
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	96
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	13168	12547	10923
55	11905	10179	9413
65	9374	7784	7461
75	6463	5292	5278
85	2308	2118	2293

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-L150-830-SAF118-DIM-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	4785.727	4785.727	4785.727	4785.727	4785.727
5	4858.781	4788.903	4757.594	4732.638	4725.377
10	4817.489	4738.083	4717.664	4689.077	4682.725
15	4739.898	4661.852	4645.517	4608.763	4604.226
20	4611.032	4555.220	4531.171	4475.814	4486.250
25	4444.958	4404.575	4370.997	4306.564	4321.992
30	4240.770	4206.285	4180.875	4099.653	4088.763
35	3988.484	3937.210	3930.857	3822.864	3743.457
40	3682.654	3631.834	3597.349	3429.461	3262.933
45	3318.745	3279.722	3162.200	2924.434	2752.916
50	2900.839	2864.085	2638.116	2425.760	2330.472
55	2433.928	2383.108	2080.908	1975.638	1924.364
60	1919.373	1872.636	1592.217	1499.652	1512.810
65	1412.077	1360.803	1172.496	1109.878	1123.945
70	976.929	883.456	815.847	768.657	778.185
75	596.231	517.731	488.238	462.374	486.876
80	283.595	244.573	230.506	225.515	239.581
85	71.693	66.702	65.794	68.517	71.239
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-L150-830-SAF118-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1765.75	N.A.	14.20
0-30	3777.97	N.A.	30.50
0-40	6202.02	N.A.	50.00
0-60	10515.12	N.A.	84.80
0-80	12291.05	N.A.	99.20
0-90	12393.57	N.A.	100.00
10-90	11939.82	N.A.	96.30
20-40	4436.27	N.A.	35.80
20-50	6823.63	N.A.	55.10
40-70	5540.26	N.A.	44.70
60-80	1775.93	N.A.	14.30
70-80	548.77	N.A.	4.40
80-90	102.52	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	12393.57	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	453.75
10-20	1312.00
20-30	2012.22
30-40	2424.05
40-50	2387.36
50-60	1925.74
60-70	1227.16
70-80	548.77
80-90	102.52
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-L150-830-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-L150-830-SAF118-DIM-UNV_.IES

UGR TABLE - CORRECTED

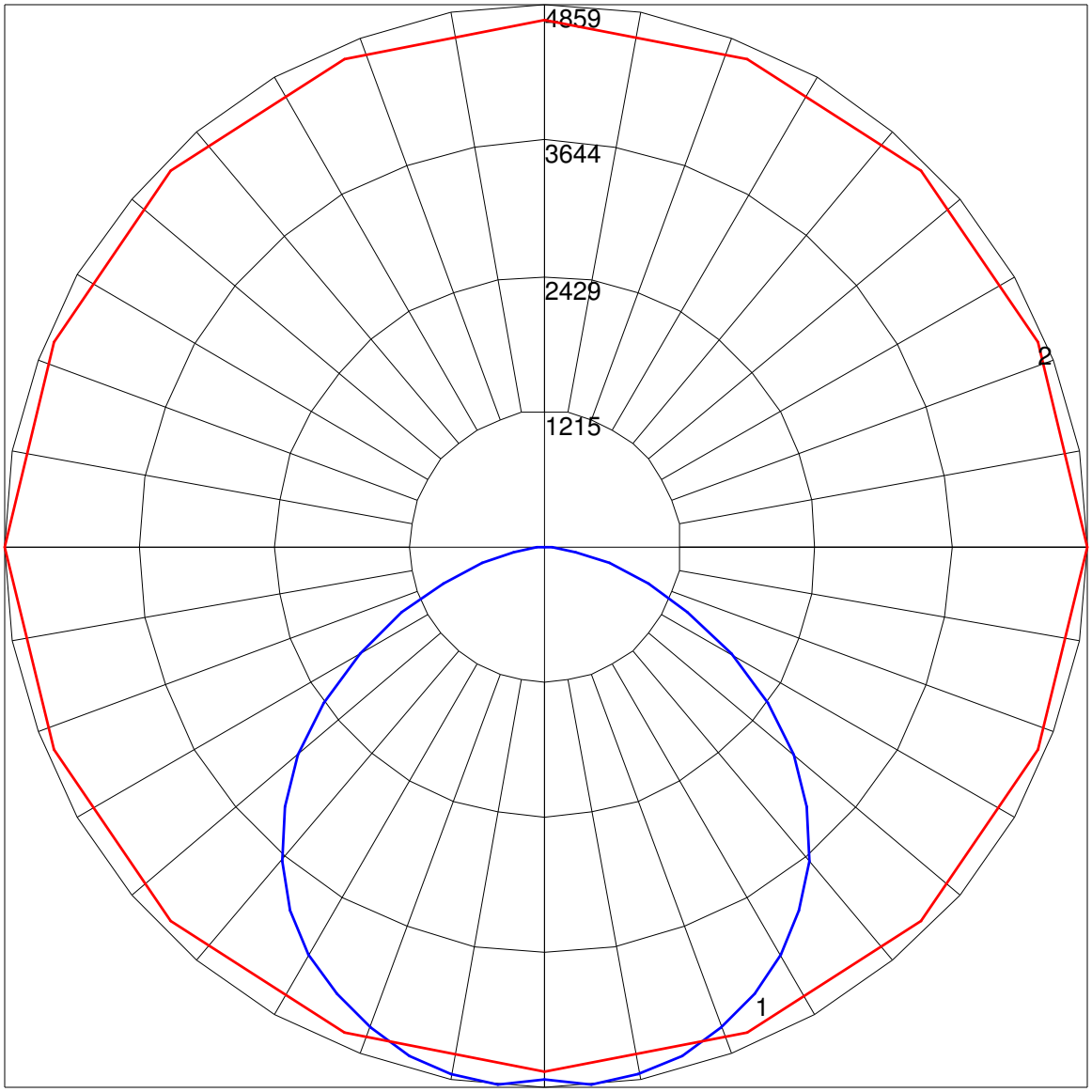
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	20.7	22.3	21.1	22.6	22.9	19.3	20.8	19.6	21.2	21.5
	3H	22.0	23.4	22.4	23.7	24.1	20.5	21.9	20.9	22.3	22.6
	4H	22.3	23.7	22.7	24.0	24.4	20.9	22.3	21.3	22.6	23.0
	6H	22.5	23.8	23.0	24.1	24.5	21.2	22.4	21.6	22.7	23.1
	8H	22.6	23.7	23.0	24.1	24.5	21.2	22.4	21.6	22.8	23.2
	12H	22.6	23.7	23.0	24.1	24.5	21.2	22.3	21.6	22.7	23.1
4H	2H	21.0	22.3	21.4	22.7	23.1	19.8	21.1	20.2	21.5	21.8
	3H	22.5	23.5	22.9	23.9	24.3	21.2	22.3	21.7	22.7	23.1
	4H	22.9	23.9	23.3	24.3	24.7	21.7	22.7	22.2	23.1	23.6
	6H	23.2	24.0	23.6	24.5	24.9	22.0	22.9	22.5	23.3	23.8
	8H	23.2	24.0	23.7	24.5	24.9	22.1	22.9	22.6	23.3	23.8
	12H	23.3	24.0	23.7	24.4	24.9	22.1	22.8	22.6	23.3	23.8
8H	4H	23.0	23.8	23.5	24.2	24.7	21.9	22.7	22.4	23.1	23.6
	6H	23.3	24.0	23.8	24.5	24.9	22.2	22.9	22.7	23.4	23.9
	8H	23.4	24.0	23.9	24.5	25.0	22.3	22.9	22.9	23.4	23.9
	12H	23.5	24.0	24.0	24.5	25.0	22.4	22.9	22.9	23.4	24.0
12H	4H	23.0	23.7	23.5	24.2	24.6	21.9	22.6	22.4	23.1	23.6
	6H	23.3	23.9	23.8	24.4	24.9	22.3	22.9	22.8	23.3	23.9
	8H	23.4	23.9	23.9	24.4	25.0	22.4	22.9	22.9	23.4	24.0

Maximum UGR = 25.0

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-L150-830-SAF118-DIM-UNV_.IES

POLAR GRAPH



Maximum Candela = 4858.781 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.