H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-840-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-L200-840-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	17238
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	130
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	18315	17451	15192
55	16559	14157	13092
65	13038	10826	10378
75	8989	7361	7341
85	3210	2946	3190

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-L200-840-SAF118-DIM-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	6656.380	6656.380	6656.380	6656.380	6656.380
5	6757.989	6660.797	6617.250	6582.539	6572.441
10	6700.558	6590.112	6561.712	6521.952	6513.116
15	6592.637	6484.085	6461.365	6410.244	6403.933
20	6413.400	6335.773	6302.324	6225.327	6239.843
25	6182.411	6126.242	6079.540	5989.921	6011.379
30	5898.409	5850.445	5815.102	5702.132	5686.985
35	5547.509	5476.193	5467.357	5317.152	5206.706
40	5122.137	5051.452	5003.487	4769.974	4538.355
45	4615.982	4561.706	4398.247	4067.542	3828.980
50	4034.724	3983.604	3669.308	3373.946	3241.411
55	3385.306	3314.621	2894.298	2747.879	2676.563
60	2669.620	2604.615	2214.586	2085.838	2104.140
65	1964.033	1892.717	1630.804	1543.710	1563.274
70	1358.793	1228.783	1134.746	1069.110	1082.364
75	829.286	720.103	679.081	643.107	677.187
80	394.447	340.171	320.607	313.665	333.229
85	99.716	92.774	91.512	95.299	99.085
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-L200-840-SAF118-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2455.95	N.A.	14.20
0-30	5254.71	N.A.	30.50
0-40	8626.27	N.A.	50.00
0-60	14625.29	N.A.	84.80
0-80	17095.39	N.A.	99.20
0-90	17237.99	N.A.	100.00
10-90	16606.87	N.A.	96.30
20-40	6170.32	N.A.	35.80
20-50	9490.86	N.A.	55.10
40-70	7705.85	N.A.	44.70
60-80	2470.1	N.A.	14.30
70-80	763.27	N.A.	4.40
80-90	142.60	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	17237.99	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	631.12
10-20	1824.83
20-30	2798.76
30-40	3371.57
40-50	3320.54
50-60	2678.48
60-70	1706.83
70-80	763.27
80-90	142.60
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-L200-840-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-L200-840-SAF118-DIM-UNV_.IES

UGR TABLE - CORRECTED

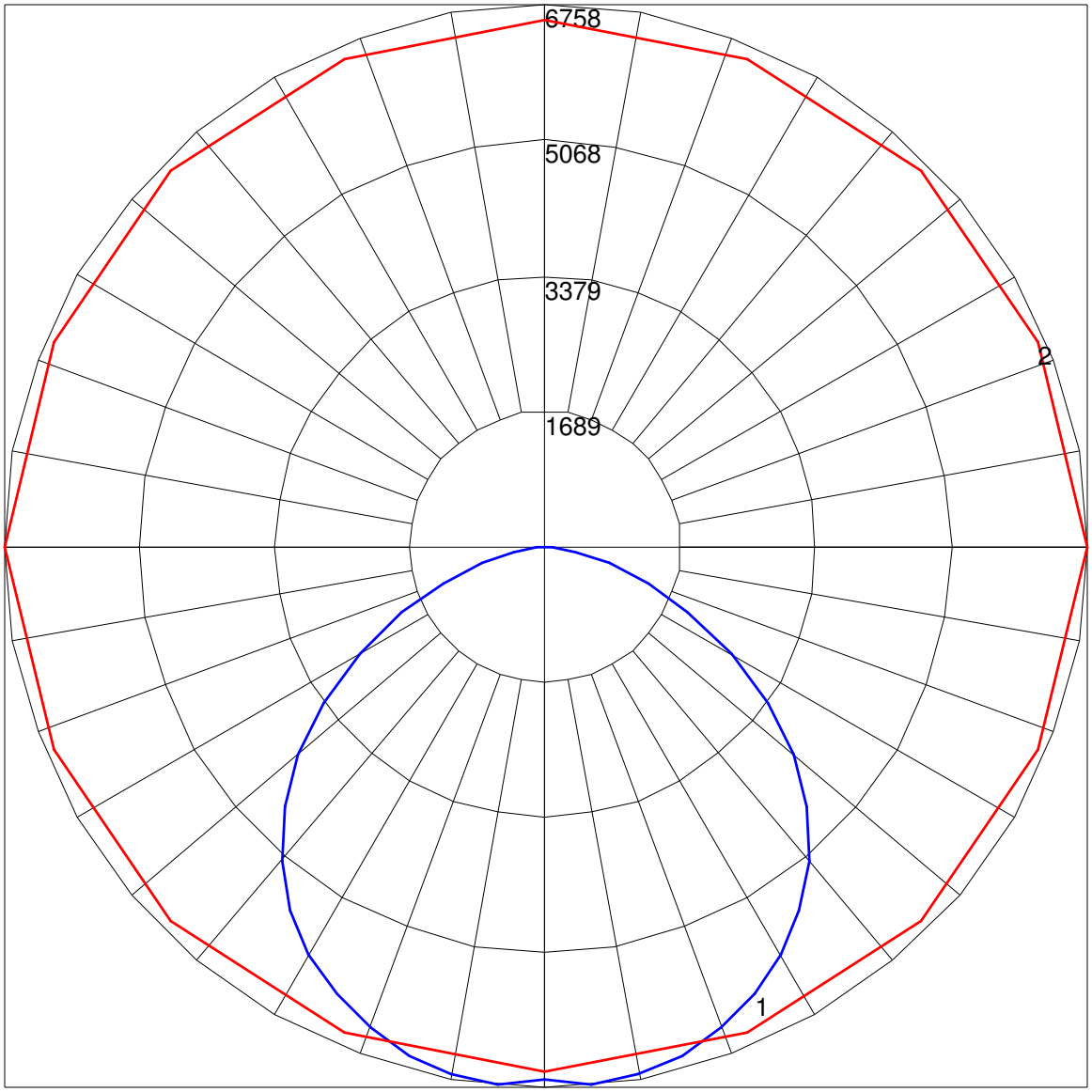
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	21.9	23.5	22.3	23.8	24.1	20.5	22.0	20.8	22.4	22.7
	3H	23.2	24.6	23.6	24.9	25.3	21.7	23.1	22.1	23.5	23.8
	4H	23.5	24.9	23.9	25.2	25.6	22.1	23.5	22.5	23.8	24.2
	6H	23.7	25.0	24.2	25.3	25.7	22.4	23.6	22.8	23.9	24.3
	8H	23.8	24.9	24.2	25.3	25.7	22.4	23.6	22.8	24.0	24.4
	12H	23.8	24.9	24.2	25.3	25.7	22.4	23.5	22.8	23.9	24.3
4H	2H	22.2	23.5	22.6	23.9	24.3	21.0	22.3	21.4	22.7	23.0
	3H	23.7	24.7	24.1	25.1	25.5	22.4	23.5	22.9	23.9	24.3
	4H	24.1	25.1	24.5	25.5	25.9	22.9	23.9	23.4	24.3	24.8
	6H	24.4	25.2	24.8	25.7	26.1	23.2	24.1	23.7	24.5	25.0
	8H	24.4	25.2	24.9	25.7	26.1	23.3	24.1	23.8	24.5	25.0
	12H	24.5	25.2	24.9	25.6	26.1	23.3	24.0	23.8	24.5	25.0
8H	4H	24.2	25.0	24.7	25.4	25.9	23.1	23.9	23.6	24.3	24.8
	6H	24.5	25.2	25.0	25.7	26.1	23.4	24.1	23.9	24.6	25.1
	8H	24.6	25.2	25.1	25.7	26.2	23.5	24.1	24.1	24.6	25.1
	12H	24.7	25.2	25.2	25.7	26.2	23.6	24.1	24.1	24.6	25.2
12H	4H	24.2	24.9	24.7	25.4	25.9	23.1	23.8	23.6	24.3	24.8
	6H	24.5	25.1	25.0	25.6	26.1	23.5	24.1	24.0	24.5	25.1
	8H	24.6	25.1	25.1	25.6	26.2	23.6	24.1	24.1	24.6	25.2

Maximum UGR = 26.2

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-L200-840-SAF118-DIM-UNV_.IES

POLAR GRAPH



Maximum Candela = 6757.989 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.