H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-940-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-L200-940-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	14308
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
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	15201	14484	12610
55	13744	11750	10866
65	10822	8986	8614
75	7461	6110	6093
85	2664	2445	2647

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	5524.795	5524.795	5524.795	5524.795	5524.795
5	5609.131	5528.462	5492.318	5463.507	5455.126
10	5561.463	5469.793	5446.221	5413.220	5405.886
15	5471.888	5381.790	5362.932	5320.503	5315.264
20	5323.122	5258.691	5230.928	5167.021	5179.069
25	5131.401	5084.781	5046.018	4971.634	4989.444
30	4895.679	4855.869	4826.534	4732.770	4720.198
35	4604.432	4545.240	4537.906	4413.236	4321.566
40	4251.373	4192.705	4152.894	3959.078	3766.834
45	3831.265	3786.216	3650.545	3376.060	3178.053
50	3348.821	3306.391	3045.525	2800.375	2690.371
55	2809.804	2751.135	2402.267	2280.739	2221.547
60	2215.785	2161.831	1838.106	1731.246	1746.436
65	1630.147	1570.955	1353.567	1281.279	1297.517
70	1127.798	1019.890	941.839	887.362	898.362
75	688.308	597.686	563.637	533.779	562.065
80	327.391	282.342	266.104	260.342	276.580
85	82.765	77.002	75.955	79.098	82.241
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2038.44	N.A.	14.20
0-30	4361.41	N.A.	30.50
0-40	7159.81	N.A.	50.00
0-60	12138.99	N.A.	84.80
0-80	14189.17	N.A.	99.20
0-90	14307.53	N.A.	100.00
10-90	13783.71	N.A.	96.30
20-40	5121.37	N.A.	35.80
20-50	7877.42	N.A.	55.10
40-70	6395.85	N.A.	44.70
60-80	2050.18	N.A.	14.30
70-80	633.51	N.A.	4.40
80-90	118.36	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	14307.53	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	523.83
10-20	1514.61
20-30	2322.97
30-40	2798.4
40-50	2756.05
50-60	2223.14
60-70	1416.67
70-80	633.51
80-90	118.36
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

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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	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

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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	21.2	22.8	21.6	23.1	23.4	19.8	21.3	20.1	21.7	22.0
	3H	22.5	23.9	22.9	24.2	24.6	21.0	22.4	21.4	22.8	23.1
	4H	22.8	24.2	23.2	24.5	24.9	21.4	22.8	21.8	23.1	23.5
	6H	23.0	24.3	23.5	24.6	25.0	21.7	22.9	22.1	23.2	23.6
	8H	23.1	24.2	23.5	24.6	25.0	21.7	22.9	22.1	23.3	23.7
	12H	23.1	24.2	23.5	24.6	25.0	21.7	22.8	22.1	23.2	23.6
4H	2H	21.5	22.8	21.9	23.2	23.6	20.3	21.6	20.7	22.0	22.3
	3H	23.0	24.0	23.4	24.4	24.8	21.7	22.8	22.2	23.2	23.6
	4H	23.4	24.4	23.8	24.8	25.2	22.2	23.2	22.7	23.6	24.1
	6H	23.7	24.5	24.1	25.0	25.4	22.5	23.4	23.0	23.8	24.3
	8H	23.7	24.5	24.2	25.0	25.4	22.6	23.4	23.1	23.8	24.3
	12H	23.8	24.5	24.2	24.9	25.4	22.6	23.3	23.1	23.8	24.3
8H	4H	23.5	24.3	24.0	24.7	25.2	22.4	23.2	22.9	23.6	24.1
	6H	23.8	24.5	24.3	25.0	25.4	22.7	23.4	23.2	23.9	24.4
	8H	23.9	24.5	24.4	25.0	25.5	22.8	23.4	23.4	23.9	24.4
	12H	24.0	24.5	24.5	25.0	25.5	22.9	23.4	23.4	23.9	24.5
12H	4H	23.5	24.2	24.0	24.7	25.1	22.4	23.1	22.9	23.6	24.1
	6H	23.8	24.4	24.3	24.9	25.4	22.8	23.4	23.3	23.8	24.4
	8H	23.9	24.4	24.4	24.9	25.5	22.9	23.4	23.4	23.9	24.5

Maximum UGR = 25.5

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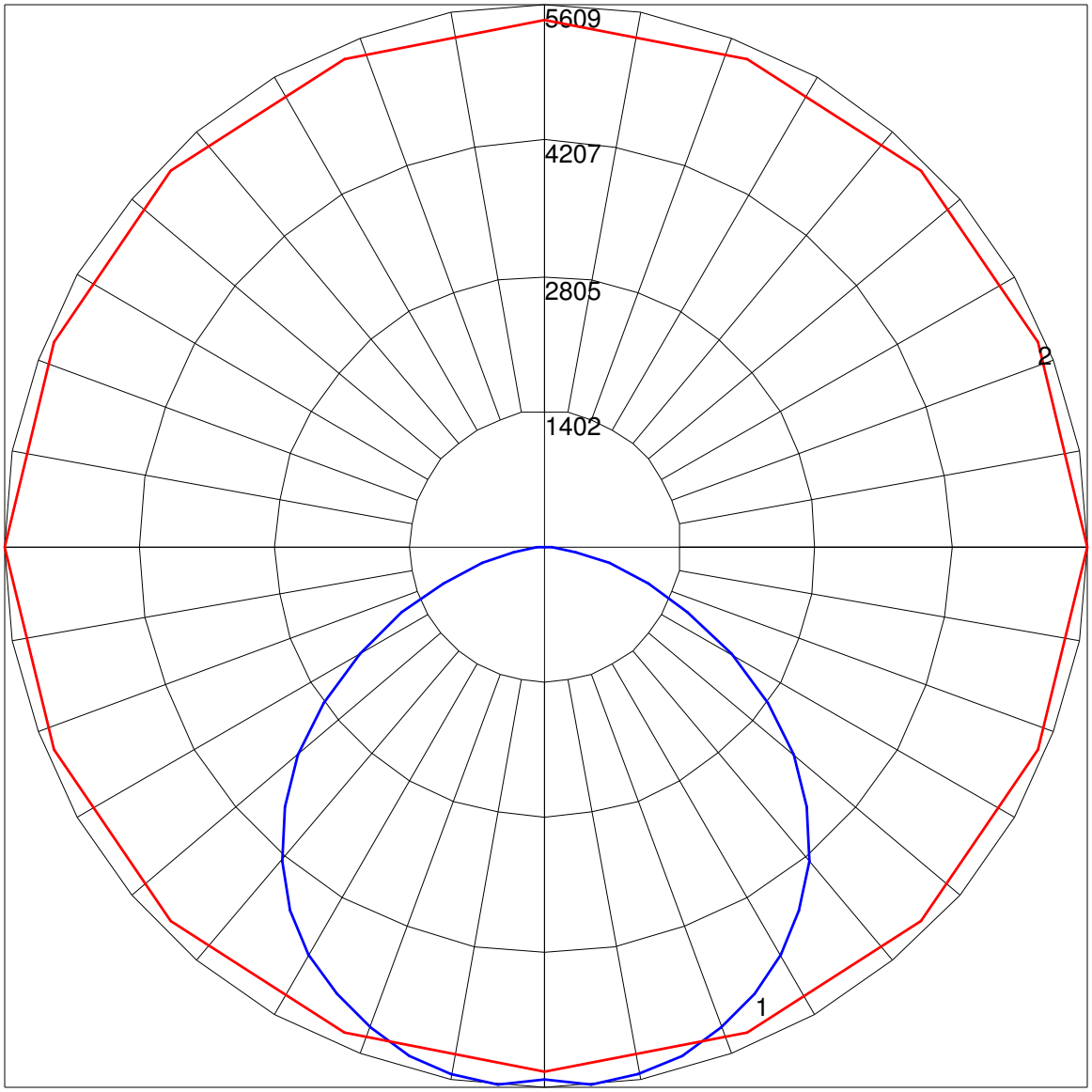
POLAR GRAPH



Maximum Candela = 5609.131 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.)

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