H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-830-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-L200-830-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	16548
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
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	17582	16753	14585
55	15897	13591	12568
65	12517	10393	9963
75	8630	7067	7047
85	3082	2828	3062

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	6390.125	6390.125	6390.125	6390.125	6390.125
5	6487.670	6394.366	6352.561	6319.238	6309.544
10	6432.536	6326.508	6299.244	6261.074	6252.592
15	6328.932	6224.722	6202.911	6153.835	6147.776
20	6156.864	6082.342	6050.231	5976.315	5990.250
25	5935.115	5881.193	5836.358	5750.325	5770.924
30	5662.473	5616.427	5582.498	5474.047	5459.506
35	5325.609	5257.145	5248.663	5104.466	4998.438
40	4917.252	4849.394	4803.348	4579.175	4356.821
45	4431.343	4379.238	4222.317	3904.841	3675.821
50	3873.335	3824.260	3522.536	3238.988	3111.755
55	3249.894	3182.036	2778.526	2637.964	2569.500
60	2562.836	2500.431	2126.002	2002.405	2019.975
65	1885.472	1817.008	1565.571	1481.961	1500.743
70	1304.441	1179.631	1089.357	1026.346	1039.069
75	796.115	691.299	651.918	617.383	650.100
80	378.670	326.565	307.783	301.118	319.900
85	95.728	89.063	87.851	91.487	95.122
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2357.71	N.A.	14.20
0-30	5044.52	N.A.	30.50
0-40	8281.22	N.A.	50.00
0-60	14040.28	N.A.	84.80
0-80	16411.58	N.A.	99.20
0-90	16548.47	N.A.	100.00
10-90	15942.6	N.A.	96.30
20-40	5923.51	N.A.	35.80
20-50	9111.23	N.A.	55.10
40-70	7397.62	N.A.	44.70
60-80	2371.3	N.A.	14.30
70-80	732.74	N.A.	4.40
80-90	136.89	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	16548.47	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	605.87
10-20	1751.84
20-30	2686.81
30-40	3236.7
40-50	3187.72
50-60	2571.34
60-70	1638.56
70-80	732.74
80-90	136.89
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	21.8	23.4	22.2	23.7	24.0	20.4	21.9	20.7	22.3	22.6
	3H	23.1	24.5	23.5	24.8	25.2	21.6	23.0	22.0	23.4	23.7
	4H	23.4	24.8	23.8	25.1	25.5	22.0	23.4	22.4	23.7	24.1
	6H	23.6	24.9	24.1	25.2	25.6	22.3	23.5	22.7	23.8	24.2
	8H	23.7	24.8	24.1	25.2	25.6	22.3	23.5	22.7	23.9	24.3
	12H	23.7	24.8	24.1	25.2	25.6	22.3	23.4	22.7	23.8	24.2
4H	2H	22.1	23.4	22.5	23.8	24.2	20.9	22.2	21.3	22.6	22.9
	3H	23.6	24.6	24.0	25.0	25.4	22.3	23.4	22.8	23.8	24.2
	4H	24.0	25.0	24.4	25.4	25.8	22.8	23.8	23.3	24.2	24.7
	6H	24.3	25.1	24.7	25.6	26.0	23.1	24.0	23.6	24.4	24.9
	8H	24.3	25.1	24.8	25.6	26.0	23.2	24.0	23.7	24.4	24.9
	12H	24.4	25.1	24.8	25.5	26.0	23.2	23.9	23.7	24.4	24.9
8H	4H	24.1	24.9	24.6	25.3	25.8	23.0	23.8	23.5	24.2	24.7
	6H	24.4	25.1	24.9	25.6	26.0	23.3	24.0	23.8	24.5	25.0
	8H	24.5	25.1	25.0	25.6	26.1	23.4	24.0	24.0	24.5	25.0
	12H	24.6	25.1	25.1	25.6	26.1	23.5	24.0	24.0	24.5	25.1
12H	4H	24.1	24.8	24.6	25.3	25.8	23.0	23.7	23.5	24.2	24.7
	6H	24.4	25.0	24.9	25.5	26.0	23.4	24.0	23.9	24.4	25.0
	8H	24.5	25.0	25.0	25.5	26.1	23.5	24.0	24.0	24.5	25.1

Maximum UGR = 26.1

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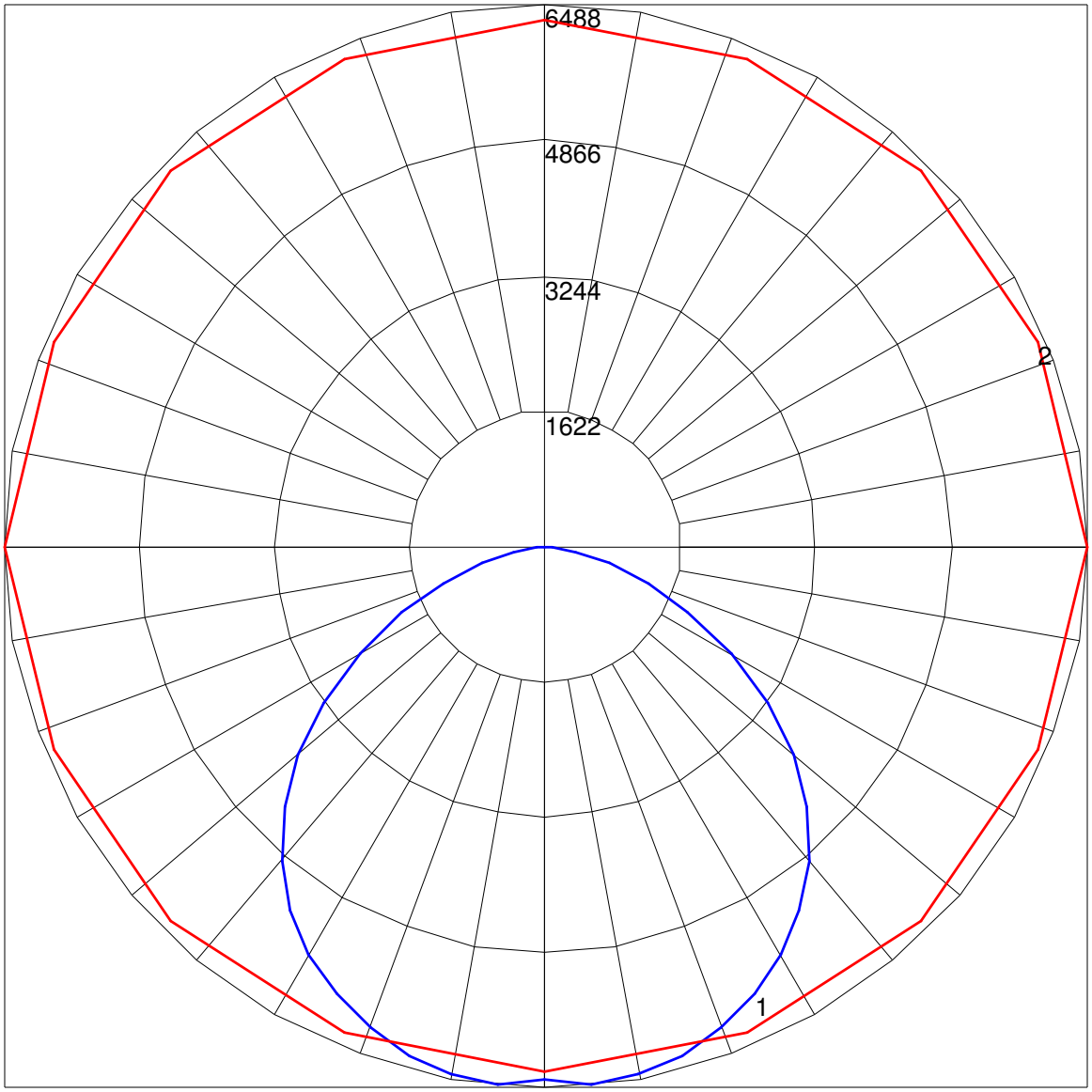
POLAR GRAPH



Maximum Candela = 6487.67 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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