H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-950-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-L200-950-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	14825
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
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	15751	15008	13065
55	14241	12175	11259
65	11213	9311	8925
75	7731	6331	6313
85	2761	2533	2743

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	5724.487	5724.487	5724.487	5724.487	5724.487
5	5811.871	5728.286	5690.836	5660.984	5652.300
10	5762.480	5667.497	5643.073	5608.879	5601.280
15	5669.668	5576.313	5556.774	5512.810	5507.383
20	5515.524	5448.765	5419.999	5353.782	5366.265
25	5316.874	5268.569	5228.404	5151.332	5169.786
30	5072.632	5031.383	5000.988	4903.834	4890.808
35	4770.858	4709.526	4701.927	4572.751	4477.768
40	4405.038	4344.249	4302.999	4102.178	3902.985
45	3969.745	3923.067	3782.492	3498.086	3292.923
50	3469.863	3425.899	3155.605	2901.593	2787.614
55	2911.363	2850.574	2489.096	2363.176	2301.844
60	2295.874	2239.969	1904.544	1793.821	1809.561
65	1689.068	1627.736	1402.491	1327.590	1344.416
70	1168.562	1056.753	975.882	919.435	930.833
75	713.186	619.289	584.009	553.072	582.381
80	339.225	292.547	275.722	269.752	286.577
85	85.756	79.786	78.700	81.957	85.213
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2112.12	N.A.	14.20
0-30	4519.05	N.A.	30.50
0-40	7418.59	N.A.	50.00
0-60	12577.75	N.A.	84.80
0-80	14702.04	N.A.	99.20
0-90	14824.67	N.A.	100.00
10-90	14281.91	N.A.	96.30
20-40	5306.48	N.A.	35.80
20-50	8162.14	N.A.	55.10
40-70	6627.03	N.A.	44.70
60-80	2124.29	N.A.	14.30
70-80	656.41	N.A.	4.40
80-90	122.63	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	14824.67	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	542.76
10-20	1569.36
20-30	2406.93
30-40	2899.55
40-50	2855.66
50-60	2303.49
60-70	1467.88
70-80	656.41
80-90	122.63
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	21.4	23.0	21.8	23.3	23.6	20.0	21.5	20.3	21.9	22.2
	3H	22.7	24.1	23.1	24.4	24.8	21.2	22.6	21.6	23.0	23.3
	4H	23.0	24.4	23.4	24.7	25.1	21.6	23.0	22.0	23.3	23.7
	6H	23.2	24.5	23.7	24.8	25.2	21.9	23.1	22.3	23.4	23.8
	8H	23.3	24.4	23.7	24.8	25.2	21.9	23.1	22.3	23.5	23.9
	12H	23.3	24.4	23.7	24.8	25.2	21.9	23.0	22.3	23.4	23.8
4H	2H	21.7	23.0	22.1	23.4	23.8	20.5	21.8	20.9	22.2	22.5
	3H	23.2	24.2	23.6	24.6	25.0	21.9	23.0	22.4	23.4	23.8
	4H	23.6	24.6	24.0	25.0	25.4	22.4	23.4	22.9	23.8	24.3
	6H	23.9	24.7	24.3	25.2	25.6	22.7	23.6	23.2	24.0	24.5
	8H	23.9	24.7	24.4	25.2	25.6	22.8	23.6	23.3	24.0	24.5
	12H	24.0	24.7	24.4	25.1	25.6	22.8	23.5	23.3	24.0	24.5
8H	4H	23.7	24.5	24.2	24.9	25.4	22.6	23.4	23.1	23.8	24.3
	6H	24.0	24.7	24.5	25.2	25.6	22.9	23.6	23.4	24.1	24.6
	8H	24.1	24.7	24.6	25.2	25.7	23.0	23.6	23.6	24.1	24.6
	12H	24.2	24.7	24.7	25.2	25.7	23.1	23.6	23.6	24.1	24.7
12H	4H	23.7	24.4	24.2	24.9	25.4	22.6	23.3	23.1	23.8	24.3
	6H	24.0	24.6	24.5	25.1	25.6	23.0	23.6	23.5	24.0	24.6
	8H	24.1	24.6	24.6	25.1	25.7	23.1	23.6	23.6	24.1	24.7

Maximum UGR = 25.7

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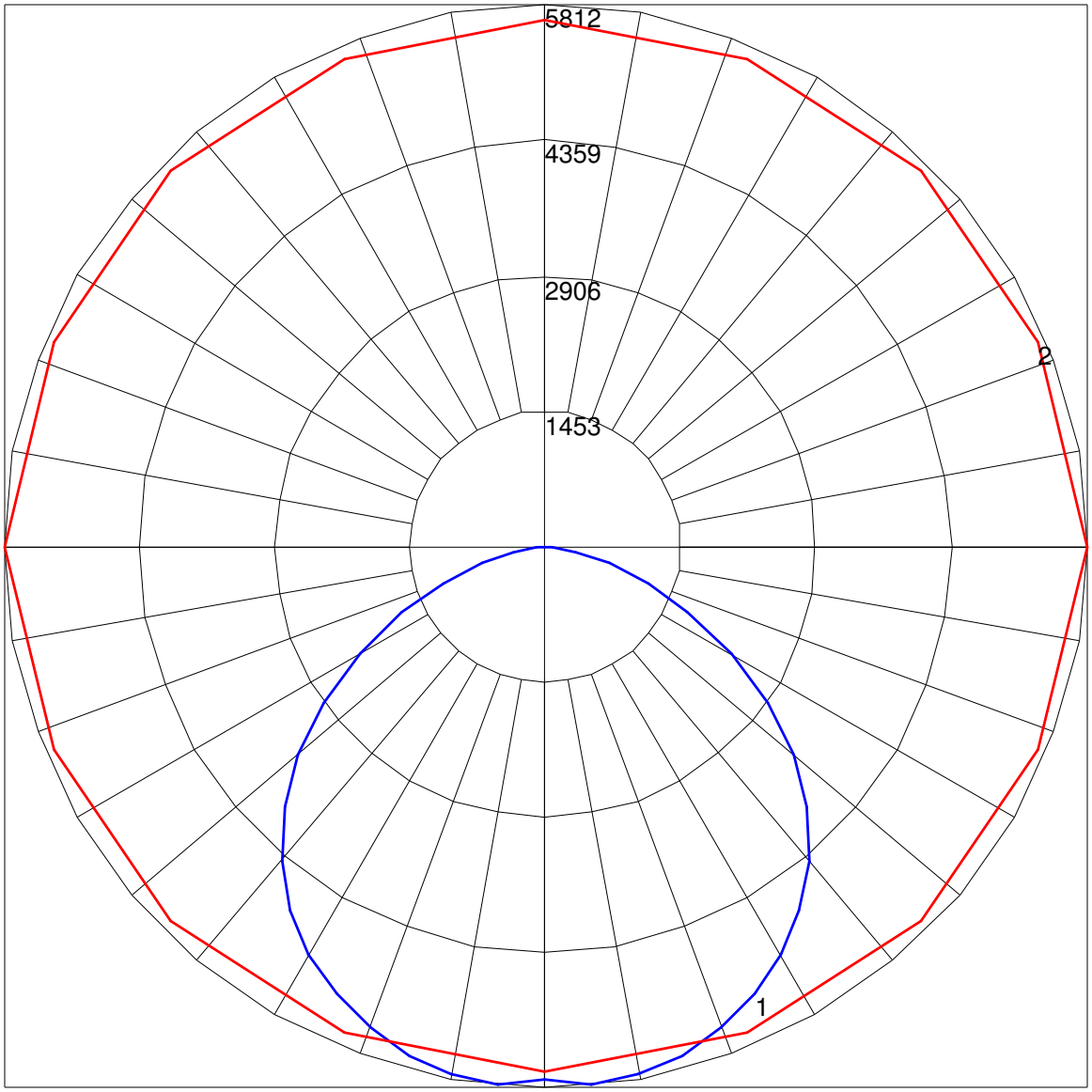
POLAR GRAPH



Maximum Candela = 5811.871 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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