H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-935-ND-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19459.0
[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 REFL w/CLEAR ACRYLIC ROD DIFFUSERS OVER LED
[MORE] 0-10V UNIVERSAL VOLTAGE 120-277 DRIVERS
[LUMCAT] GL-4-L200-935-ND-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Commercial, Industrial, Manufacturing, Warehouse, High Bay
[_SEARCH_MOUNTING] Pendant, Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	15272
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	131
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.32
Spacing Criterion (90-270)	0.58
Spacing Criterion (Diagonal)	0.72
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	1.04 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	37614	4014	2967
55	25776	2980	2227
65	15598	2259	2292
75	7638	2495	2081
85	2928	922	922

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	15402.618	15402.618	15402.618	15402.618	15402.618
5	15058.310	14938.622	14698.699	14500.311	14385.542
10	14938.622	14448.392	13363.546	12430.634	12258.480
15	14735.315	13655.935	11591.177	10016.101	9494.720
20	14985.622	12508.786	8744.346	6382.279	5631.359
25	14307.389	10782.871	6403.047	4327.905	3712.521
30	13984.395	8644.879	3889.594	2388.299	2059.840
35	12753.628	6199.741	2299.216	1506.760	1366.304
40	11924.555	4249.752	1491.457	1131.300	1058.612
45	10308.490	2648.990	1100.148	860.225	813.224
50	7951.343	1777.835	865.690	703.920	662.384
55	5730.279	1319.303	662.384	542.149	495.149
60	3942.060	938.378	516.463	453.613	422.461
65	2554.988	578.766	369.995	391.309	375.460
70	1512.225	416.996	318.076	328.459	291.843
75	766.223	312.610	250.307	224.074	208.771
80	369.995	229.539	156.305	98.920	83.618
85	98.920	73.234	31.152	31.152	31.152
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	4626.96	N.A.	30.30
0-30	8113.84	N.A.	53.10
0-40	10856.04	N.A.	71.10
0-60	14130.44	N.A.	92.50
0-80	15196.13	N.A.	99.50
0-90	15271.82	N.A.	100.00
10-90	13903.86	N.A.	91.00
20-40	6229.08	N.A.	40.80
20-50	8218.9	N.A.	53.80
40-70	3995.51	N.A.	26.20
60-80	1065.69	N.A.	7.00
70-80	344.58	N.A.	2.30
80-90	75.69	N.A.	0.50
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	15271.82	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1367.96
10-20	3259.00
20-30	3486.88
30-40	2742.2
40-50	1989.82
50-60	1284.58
60-70	721.11
70-80	344.58
80-90	75.69
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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72
4	92	82	76	70	90	81	75	70	79	73	69	77	72	68	75	71	67	66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	69	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	51
8	72	61	54	49	71	60	54	49	59	53	49	58	53	49	57	52	48	47
9	68	57	50	46	67	57	50	46	56	50	45	55	49	45	54	49	45	44
10	65	54	47	43	64	53	47	43	52	46	42	51	46	42	51	46	42	41

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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	18.9	20.2	19.2	20.5	20.8	9.9	11.2	10.2	11.5	11.8
	3H	20.7	21.9	21.1	22.2	22.6	11.9	13.1	12.3	13.4	13.8
	4H	21.2	22.3	21.6	22.7	23.0	12.7	13.7	13.1	14.1	14.5
	6H	21.5	22.5	22.0	22.9	23.3	13.0	14.0	13.4	14.3	14.7
	8H	21.6	22.6	22.0	22.9	23.3	13.0	14.0	13.5	14.4	14.8
	12H	21.6	22.5	22.1	22.9	23.3	13.0	13.9	13.5	14.3	14.8
4H	2H	18.7	19.8	19.1	20.1	20.5	10.5	11.6	10.9	11.9	12.3
	3H	20.6	21.5	21.0	21.9	22.3	12.9	13.7	13.3	14.1	14.5
	4H	21.2	22.0	21.6	22.4	22.8	13.7	14.5	14.1	14.9	15.4
	6H	21.6	22.3	22.1	22.7	23.2	14.1	14.8	14.6	15.2	15.7
	8H	21.7	22.3	22.2	22.8	23.3	14.2	14.8	14.6	15.3	15.7
	12H	21.8	22.3	22.3	22.8	23.3	14.2	14.8	14.7	15.3	15.7
8H	4H	21.1	21.7	21.6	22.2	22.6	14.1	14.8	14.6	15.2	15.7
	6H	21.6	22.1	22.1	22.6	23.1	14.6	15.2	15.1	15.7	16.1
	8H	21.7	22.2	22.2	22.7	23.2	14.8	15.2	15.3	15.7	16.2
	12H	21.8	22.2	22.3	22.7	23.3	14.8	15.2	15.3	15.7	16.3
12H	4H	21.1	21.6	21.6	22.1	22.6	14.2	14.8	14.7	15.3	15.8
	6H	21.5	22.0	22.1	22.5	23.0	14.8	15.3	15.3	15.7	16.3
	8H	21.7	22.1	22.2	22.6	23.2	14.9	15.3	15.5	15.8	16.4

Maximum UGR = 23.3

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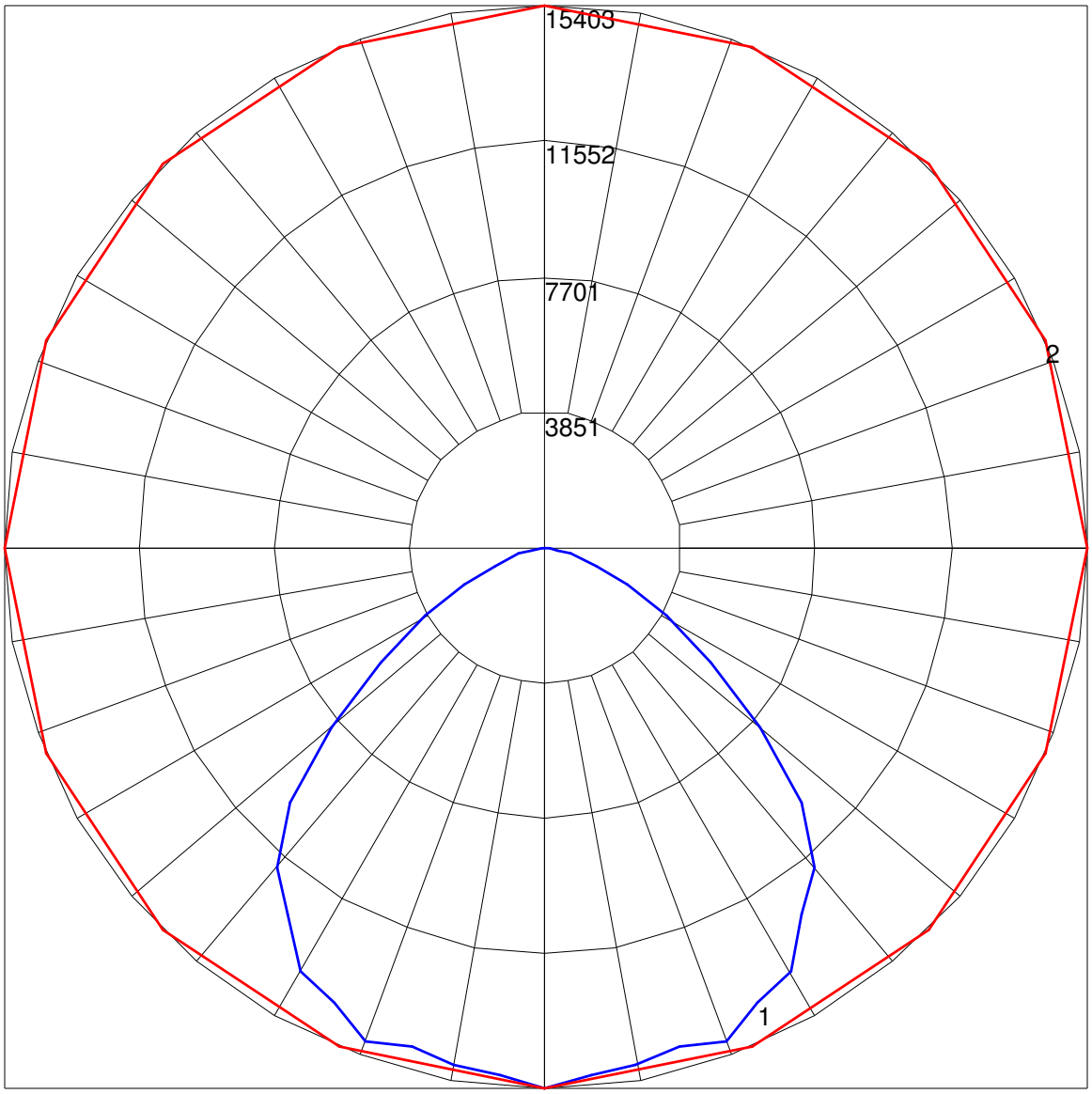
POLAR GRAPH



Maximum Candela = 15402.618 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

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