H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-840-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-L200-840-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	19090
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	146
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	47017	5018	3709
55	32220	3724	2784
65	19498	2824	2865
75	9548	3119	2601
85	3660	1153	1153

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	19253.273	19253.273	19253.273	19253.273	19253.273
5	18822.888	18673.277	18373.374	18125.389	17981.927
10	18673.277	18060.490	16704.433	15538.293	15323.100
15	18419.145	17069.920	14488.971	12520.127	11868.400
20	18732.028	15635.983	10930.432	7977.849	7039.198
25	17884.237	13478.589	8003.809	5409.881	4640.652
30	17480.494	10806.099	4861.993	2985.374	2574.800
35	15942.036	7749.677	2874.021	1883.450	1707.880
40	14905.694	5312.190	1864.322	1414.125	1323.265
45	12885.613	3311.238	1375.185	1075.281	1016.530
50	9939.179	2222.294	1082.113	879.900	827.980
55	7162.849	1649.129	827.980	677.687	618.936
60	4927.576	1172.972	645.579	567.016	528.077
65	3193.736	723.458	462.494	489.137	469.325
70	1890.282	521.245	397.594	410.574	364.803
75	957.779	390.763	312.884	280.092	260.964
80	462.494	286.924	195.381	123.651	104.522
85	123.651	91.542	38.940	38.940	38.940
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	5783.7	N.A.	30.30
0-30	10142.3	N.A.	53.10
0-40	13570.05	N.A.	71.10
0-60	17663.05	N.A.	92.50
0-80	18995.16	N.A.	99.50
0-90	19089.77	N.A.	100.00
10-90	17379.82	N.A.	91.00
20-40	7786.35	N.A.	40.80
20-50	10273.62	N.A.	53.80
40-70	4994.38	N.A.	26.20
60-80	1332.11	N.A.	7.00
70-80	430.72	N.A.	2.30
80-90	94.62	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	19089.77	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1709.95
10-20	4073.75
20-30	4358.59
30-40	3427.76
40-50	2487.27
50-60	1605.72
60-70	901.39
70-80	430.72
80-90	94.62
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	19.7	21.0	20.0	21.3	21.6	10.7	12.0	11.0	12.3	12.6
	3H	21.5	22.7	21.9	23.0	23.4	12.7	13.9	13.1	14.2	14.6
	4H	22.0	23.1	22.4	23.5	23.8	13.5	14.5	13.9	14.9	15.3
	6H	22.3	23.3	22.8	23.7	24.1	13.8	14.8	14.2	15.1	15.5
	8H	22.4	23.4	22.8	23.7	24.1	13.8	14.8	14.3	15.2	15.6
	12H	22.4	23.3	22.9	23.7	24.1	13.8	14.7	14.3	15.1	15.6
4H	2H	19.5	20.6	19.9	20.9	21.3	11.3	12.4	11.7	12.7	13.1
	3H	21.4	22.3	21.8	22.7	23.1	13.7	14.5	14.1	14.9	15.3
	4H	22.0	22.8	22.4	23.2	23.6	14.5	15.3	14.9	15.7	16.2
	6H	22.4	23.1	22.9	23.5	24.0	14.9	15.6	15.4	16.0	16.5
	8H	22.5	23.1	23.0	23.6	24.1	15.0	15.6	15.4	16.1	16.5
	12H	22.6	23.1	23.1	23.6	24.1	15.0	15.6	15.5	16.1	16.5
8H	4H	21.9	22.5	22.4	23.0	23.4	14.9	15.6	15.4	16.0	16.5
	6H	22.4	22.9	22.9	23.4	23.9	15.4	16.0	15.9	16.5	16.9
	8H	22.5	23.0	23.0	23.5	24.0	15.6	16.0	16.1	16.5	17.0
	12H	22.6	23.0	23.1	23.5	24.1	15.6	16.0	16.1	16.5	17.1
12H	4H	21.9	22.4	22.4	22.9	23.4	15.0	15.6	15.5	16.1	16.6
	6H	22.3	22.8	22.9	23.3	23.8	15.6	16.1	16.1	16.5	17.1
	8H	22.5	22.9	23.0	23.4	24.0	15.7	16.1	16.3	16.6	17.2

Maximum UGR = 24.1

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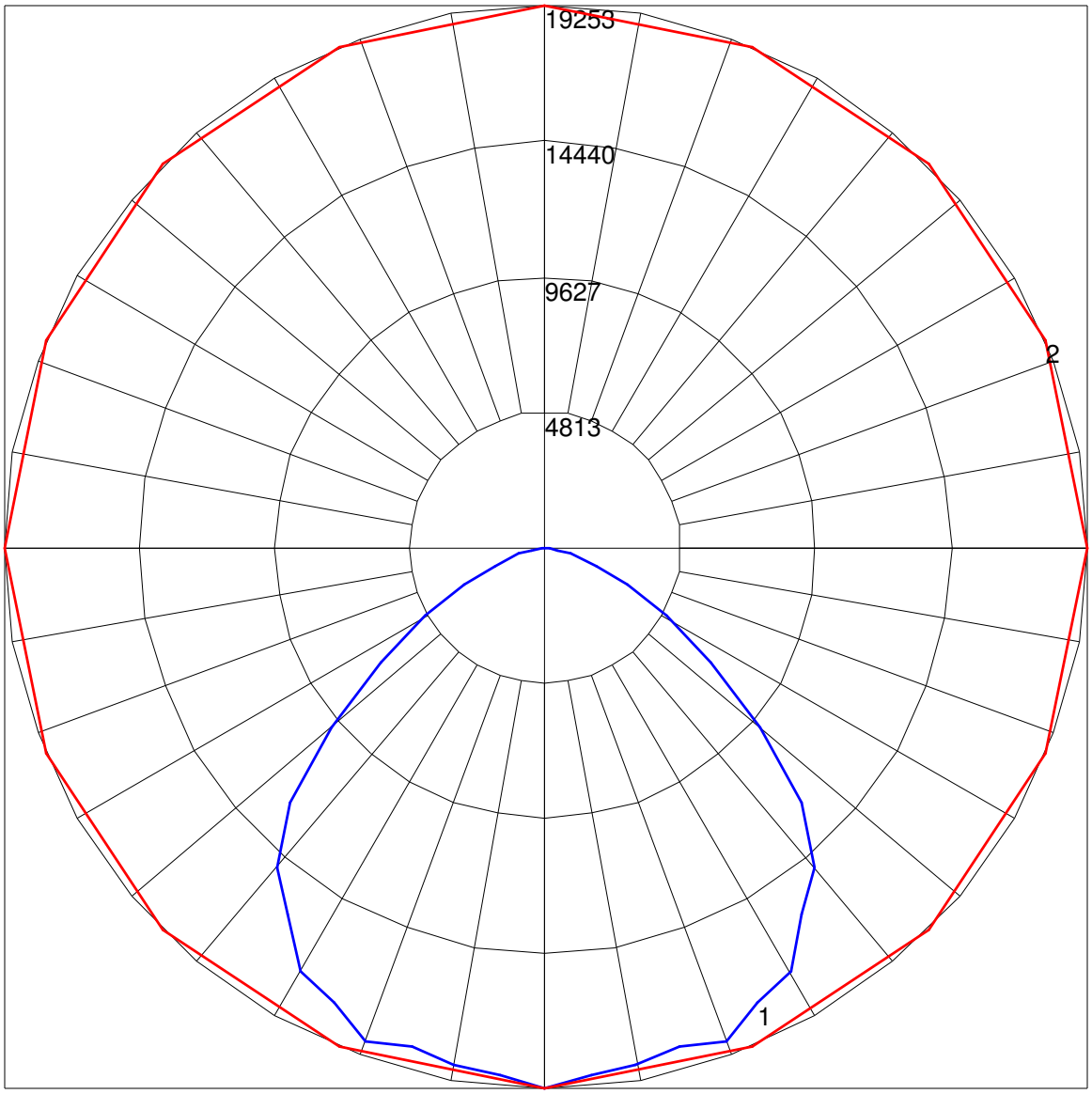
POLAR GRAPH



Maximum Candela = 19253.273 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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