H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-850-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19438.0
[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 HIGHBAY LUMINAIRE
[MORE] WHITE REFLECTOR w/OPEN BOTTOM
[MORE] 0-10V DIMMING DRIVERS
[LUMCAT] GL-4-L200-850-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	20698
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	156
Total Luminaire Watts	133
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.42
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	1.05 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	19230	19273	19485
55	17753	18527	13966
65	16698	13376	13618
75	12799	8531	7881
85	7021	4544	5167

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	7528.140	7528.140	7528.140	7528.140	7528.140
5	7419.818	7417.745	7419.818	7422.410	7424.483
10	7413.080	7407.897	7413.080	7422.410	7422.410
15	7258.112	7267.441	7288.173	7290.764	7288.173
20	6976.163	6982.901	6994.822	7004.151	7004.151
25	6577.081	6595.739	6609.733	6583.819	6583.819
30	6196.657	6217.907	6201.322	6196.657	6194.066
35	5790.319	5818.307	5799.648	5811.569	5813.642
40	5532.211	5567.455	5538.949	5555.534	5572.120
45	5320.750	5348.737	5332.670	5372.579	5391.237
50	4702.950	4747.523	4790.022	4822.674	4792.614
55	3984.602	4052.498	4158.229	3270.919	3134.609
60	3338.814	3404.637	3407.229	2697.692	2709.612
65	2761.441	2796.685	2212.055	2277.878	2251.964
70	2023.917	2117.727	1730.565	1514.439	1213.832
75	1296.240	1070.784	863.987	880.572	798.164
80	720.939	645.787	371.095	258.108	227.529
85	239.449	154.968	154.968	173.627	176.218
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2757.42	N.A.	13.30
0-30	5801.54	N.A.	28.00
0-40	9465.76	N.A.	45.70
0-60	16981.68	N.A.	82.00
0-80	20484.51	N.A.	99.00
0-90	20697.63	N.A.	100.00
10-90	19988.2	N.A.	96.60
20-40	6708.33	N.A.	32.40
20-50	10774.48	N.A.	52.10
40-70	9934.74	N.A.	48.00
60-80	3502.83	N.A.	16.90
70-80	1084.01	N.A.	5.20
80-90	213.12	N.A.	1.00
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	20697.63	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	709.43
10-20	2047.99
20-30	3044.11
30-40	3664.22
40-50	4066.15
50-60	3449.77
60-70	2418.82
70-80	1084.01
80-90	213.12
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	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52
5	77	64	55	49	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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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	22.4	24.1	22.8	24.4	24.7	20.9	22.5	21.3	22.8	23.1
	3H	24.2	25.7	24.6	26.0	26.4	22.4	23.8	22.7	24.1	24.5
	4H	24.7	26.1	25.1	26.4	26.8	22.7	24.1	23.1	24.4	24.8
	6H	25.0	26.3	25.5	26.7	27.1	22.8	24.1	23.2	24.5	24.9
	8H	25.1	26.3	25.6	26.7	27.1	22.8	24.1	23.3	24.4	24.8
	12H	25.2	26.3	25.6	26.7	27.1	22.9	24.0	23.3	24.4	24.8
4H	2H	22.8	24.2	23.2	24.5	24.9	21.6	22.9	21.9	23.3	23.6
	3H	24.8	26.0	25.2	26.4	26.8	23.2	24.4	23.6	24.8	25.2
	4H	25.4	26.4	25.8	26.8	27.3	23.7	24.7	24.1	25.1	25.6
	6H	25.9	26.7	26.3	27.2	27.6	23.8	24.7	24.3	25.2	25.6
	8H	26.0	26.8	26.4	27.3	27.7	23.9	24.7	24.3	25.1	25.6
	12H	26.0	26.8	26.5	27.3	27.7	23.9	24.6	24.4	25.1	25.6
8H	4H	25.5	26.3	26.0	26.8	27.2	23.9	24.8	24.4	25.2	25.7
	6H	26.0	26.7	26.5	27.2	27.7	24.1	24.8	24.6	25.3	25.8
	8H	26.2	26.8	26.7	27.3	27.8	24.1	24.8	24.6	25.3	25.7
	12H	26.3	26.8	26.8	27.3	27.9	24.2	24.8	24.7	25.3	25.8
12H	4H	25.5	26.2	26.0	26.7	27.2	23.9	24.7	24.4	25.2	25.6
	6H	26.0	26.6	26.5	27.1	27.6	24.1	24.8	24.6	25.2	25.7
	8H	26.2	26.7	26.7	27.2	27.8	24.2	24.7	24.7	25.2	25.8

Maximum UGR = 27.9

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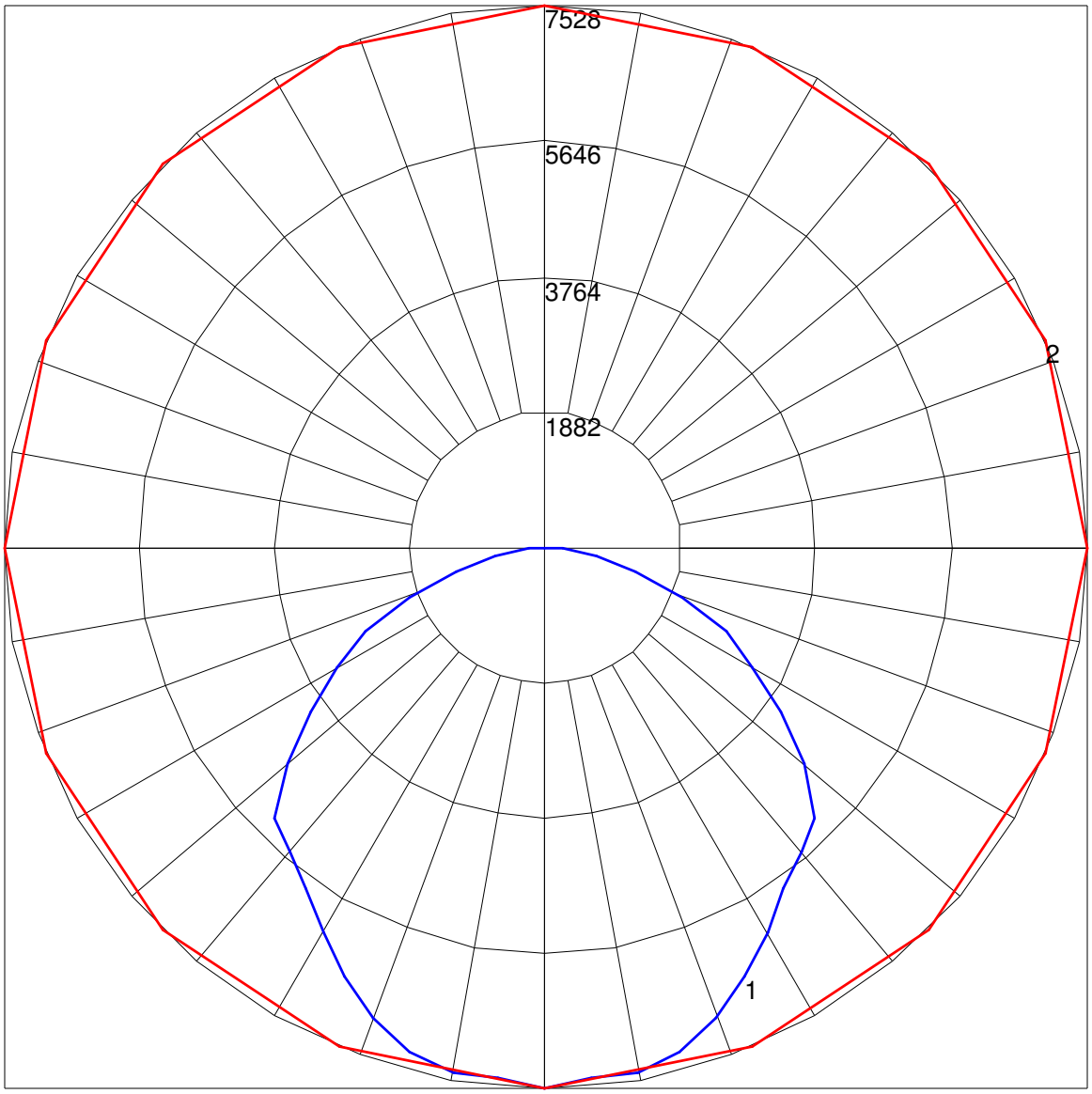
POLAR GRAPH



Maximum Candela = 7528.14 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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