H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-835-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-L200-835-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	19492
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	147
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	18110	18150	18350
55	16719	17448	13153
65	15726	12597	12824
75	12053	8034	7422
85	6612	4279	4866

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	7089.607	7089.607	7089.607	7089.607	7089.607
5	6987.595	6985.643	6987.595	6990.036	6991.988
10	6981.250	6976.369	6981.250	6990.036	6990.036
15	6835.309	6844.095	6863.619	6866.059	6863.619
20	6569.784	6576.129	6587.356	6596.141	6596.141
25	6193.950	6211.521	6224.700	6200.295	6200.295
30	5835.686	5855.698	5840.079	5835.686	5833.246
35	5453.018	5479.376	5461.804	5473.030	5474.983
40	5209.946	5243.137	5216.291	5231.911	5247.530
45	5010.803	5037.160	5022.029	5059.612	5077.184
50	4428.991	4470.968	4510.991	4541.742	4513.432
55	3752.489	3816.430	3916.001	3080.379	2952.010
60	3144.320	3206.308	3208.749	2540.544	2551.771
65	2600.580	2633.771	2083.198	2145.186	2120.781
70	1906.018	1994.364	1629.756	1426.219	1143.123
75	1220.730	1008.408	813.658	829.277	751.669
80	678.943	608.169	349.477	243.072	214.275
85	225.501	145.941	145.941	163.512	165.953
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2596.8	N.A.	13.30
0-30	5463.58	N.A.	28.00
0-40	8914.35	N.A.	45.70
0-60	15992.45	N.A.	82.00
0-80	19291.23	N.A.	99.00
0-90	19491.94	N.A.	100.00
10-90	18823.83	N.A.	96.60
20-40	6317.56	N.A.	32.40
20-50	10146.84	N.A.	52.10
40-70	9356.02	N.A.	48.00
60-80	3298.78	N.A.	16.90
70-80	1020.86	N.A.	5.20
80-90	200.71	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	19491.94	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	668.10
10-20	1928.69
20-30	2866.78
30-40	3450.77
40-50	3829.29
50-60	3248.81
60-70	2277.92
70-80	1020.86
80-90	200.71
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	22.2	23.9	22.6	24.2	24.5	20.7	22.3	21.1	22.6	22.9
	3H	24.0	25.5	24.4	25.8	26.2	22.2	23.6	22.5	23.9	24.3
	4H	24.5	25.9	24.9	26.2	26.6	22.5	23.9	22.9	24.2	24.6
	6H	24.8	26.1	25.3	26.5	26.9	22.6	23.9	23.0	24.3	24.7
	8H	24.9	26.1	25.4	26.5	26.9	22.6	23.9	23.1	24.2	24.6
	12H	25.0	26.1	25.4	26.5	26.9	22.7	23.8	23.1	24.2	24.6
4H	2H	22.6	24.0	23.0	24.3	24.7	21.4	22.7	21.7	23.1	23.4
	3H	24.6	25.8	25.0	26.2	26.6	23.0	24.2	23.4	24.6	25.0
	4H	25.2	26.2	25.6	26.6	27.1	23.5	24.5	23.9	24.9	25.4
	6H	25.7	26.5	26.1	27.0	27.4	23.6	24.5	24.1	25.0	25.4
	8H	25.8	26.6	26.2	27.1	27.5	23.7	24.5	24.1	24.9	25.4
	12H	25.8	26.6	26.3	27.1	27.5	23.7	24.4	24.2	24.9	25.4
8H	4H	25.3	26.1	25.8	26.6	27.0	23.7	24.6	24.2	25.0	25.5
	6H	25.8	26.5	26.3	27.0	27.5	23.9	24.6	24.4	25.1	25.6
	8H	26.0	26.6	26.5	27.1	27.6	23.9	24.6	24.4	25.1	25.5
	12H	26.1	26.6	26.6	27.1	27.7	24.0	24.6	24.5	25.1	25.6
12H	4H	25.3	26.0	25.8	26.5	27.0	23.7	24.5	24.2	25.0	25.4
	6H	25.8	26.4	26.3	26.9	27.4	23.9	24.6	24.4	25.0	25.5
	8H	26.0	26.5	26.5	27.0	27.6	24.0	24.5	24.5	25.0	25.6

Maximum UGR = 27.7

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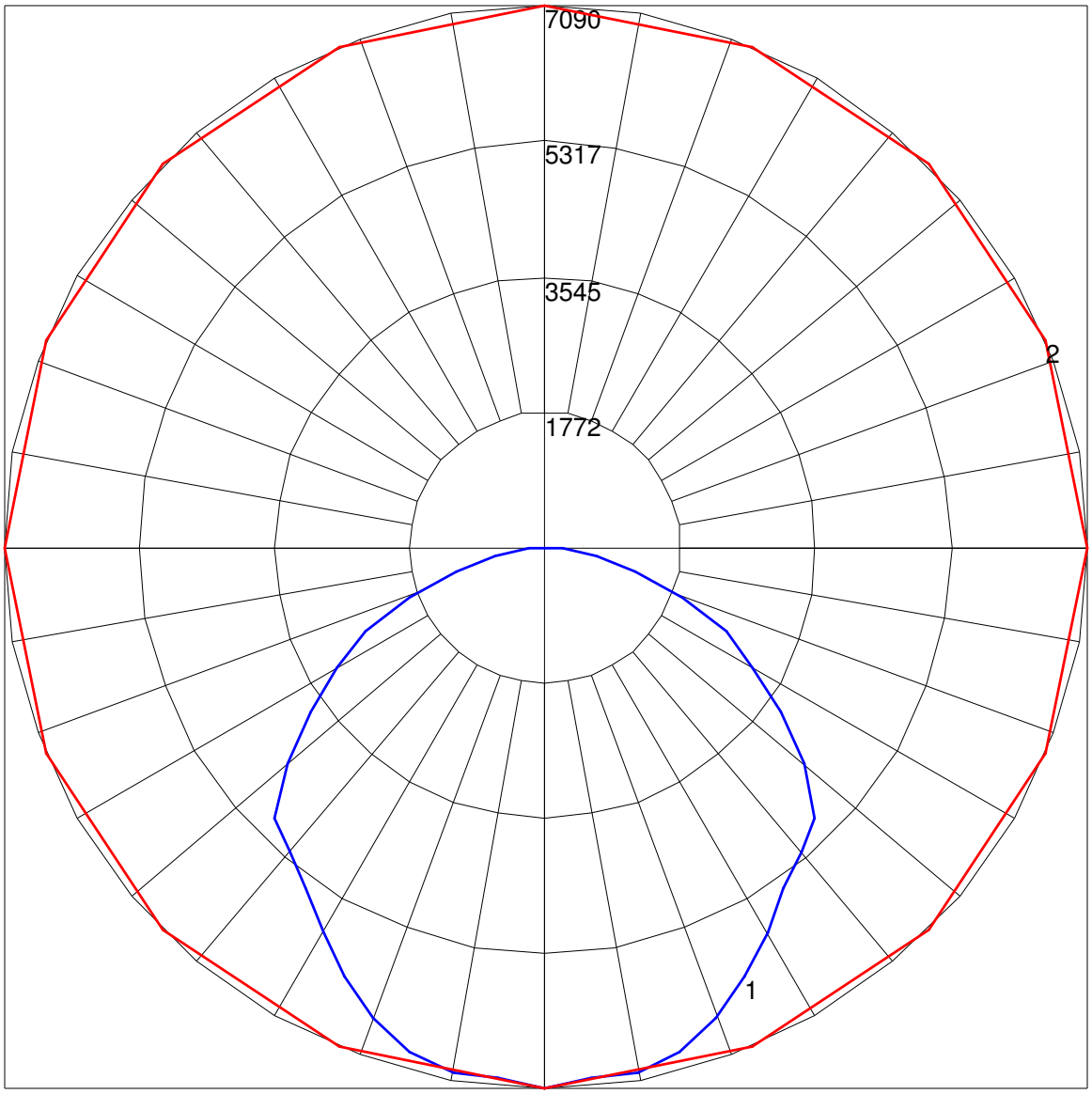
POLAR GRAPH



Maximum Candela = 7089.607 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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