H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-930-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-L200-930-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	15875
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
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	14749	14782	14944
55	13617	14210	10712
65	12808	10259	10445
75	9817	6543	6045
85	5385	3485	3963

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	5774.010	5774.010	5774.010	5774.010	5774.010
5	5690.928	5689.338	5690.928	5692.916	5694.506
10	5685.760	5681.785	5685.760	5692.916	5692.916
15	5566.901	5574.056	5589.957	5591.945	5589.957
20	5350.649	5355.817	5364.960	5372.115	5372.115
25	5044.557	5058.868	5069.601	5049.725	5049.725
30	4752.776	4769.074	4756.353	4752.776	4750.788
35	4441.118	4462.584	4448.274	4457.417	4459.007
40	4243.152	4270.184	4248.320	4261.041	4273.761
45	4080.963	4102.429	4090.106	4120.715	4135.026
50	3607.117	3641.303	3673.900	3698.944	3675.888
55	3056.151	3108.226	3189.321	2508.763	2404.214
60	2560.838	2611.323	2613.311	2069.103	2078.246
65	2117.998	2145.030	1696.625	1747.110	1727.234
70	1552.324	1624.276	1327.327	1161.560	930.997
75	994.203	821.281	662.670	675.390	612.184
80	552.953	495.313	284.626	197.966	174.512
85	183.655	118.859	118.859	133.170	135.158
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2114.92	N.A.	13.30
0-30	4449.72	N.A.	28.00
0-40	7260.14	N.A.	45.70
0-60	13024.78	N.A.	82.00
0-80	15711.42	N.A.	99.00
0-90	15874.88	N.A.	100.00
10-90	15330.75	N.A.	96.60
20-40	5145.23	N.A.	32.40
20-50	8263.92	N.A.	52.10
40-70	7619.85	N.A.	48.00
60-80	2686.64	N.A.	16.90
70-80	831.43	N.A.	5.20
80-90	163.46	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	15874.88	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	544.13
10-20	1570.79
20-30	2334.8
30-40	2810.42
40-50	3118.7
50-60	2645.94
60-70	1855.21
70-80	831.43
80-90	163.46
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	21.5	23.2	21.9	23.5	23.8	20.0	21.6	20.4	21.9	22.2
	3H	23.3	24.8	23.7	25.1	25.5	21.5	22.9	21.8	23.2	23.6
	4H	23.8	25.2	24.2	25.5	25.9	21.8	23.2	22.2	23.5	23.9
	6H	24.1	25.4	24.6	25.8	26.2	21.9	23.2	22.3	23.6	24.0
	8H	24.2	25.4	24.7	25.8	26.2	21.9	23.2	22.4	23.5	23.9
	12H	24.3	25.4	24.7	25.8	26.2	22.0	23.1	22.4	23.5	23.9
4H	2H	21.9	23.3	22.3	23.6	24.0	20.7	22.0	21.0	22.4	22.7
	3H	23.9	25.1	24.3	25.5	25.9	22.3	23.5	22.7	23.9	24.3
	4H	24.5	25.5	24.9	25.9	26.4	22.8	23.8	23.2	24.2	24.7
	6H	25.0	25.8	25.4	26.3	26.7	22.9	23.8	23.4	24.3	24.7
	8H	25.1	25.9	25.5	26.4	26.8	23.0	23.8	23.4	24.2	24.7
	12H	25.1	25.9	25.6	26.4	26.8	23.0	23.7	23.5	24.2	24.7
8H	4H	24.6	25.4	25.1	25.9	26.3	23.0	23.9	23.5	24.3	24.8
	6H	25.1	25.8	25.6	26.3	26.8	23.2	23.9	23.7	24.4	24.9
	8H	25.3	25.9	25.8	26.4	26.9	23.2	23.9	23.7	24.4	24.8
	12H	25.4	25.9	25.9	26.4	27.0	23.3	23.9	23.8	24.4	24.9
12H	4H	24.6	25.3	25.1	25.8	26.3	23.0	23.8	23.5	24.3	24.7
	6H	25.1	25.7	25.6	26.2	26.7	23.2	23.9	23.7	24.3	24.8
	8H	25.3	25.8	25.8	26.3	26.9	23.3	23.8	23.8	24.3	24.9

Maximum UGR = 27.0

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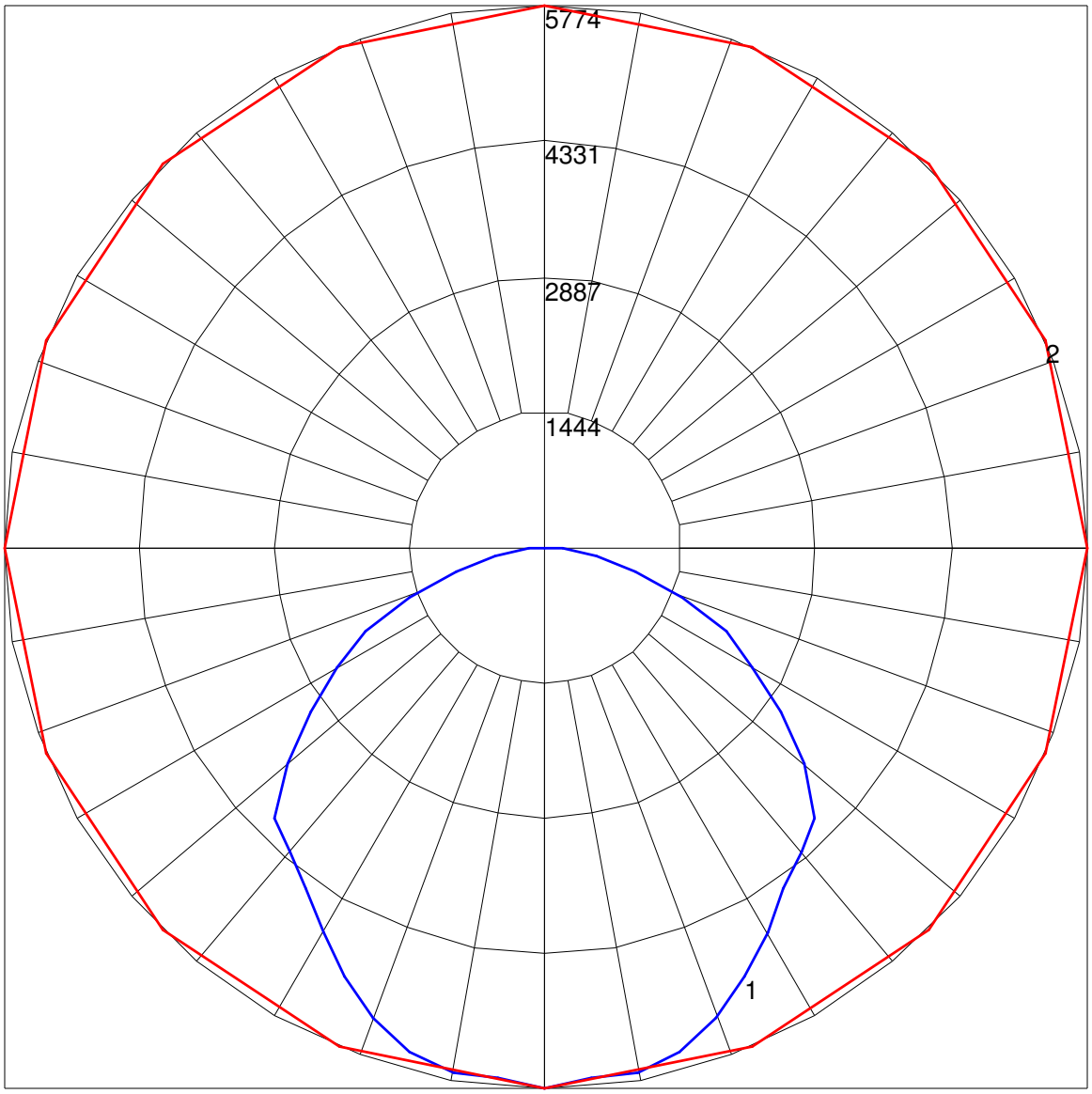
POLAR GRAPH



Maximum Candela = 5774.01 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.)