H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-850-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19562.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x2'RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/CENTER FROSTED RIBBED ACRYLIC LENS
[MORE] ELECTRONIC 0-10V LED DRIVER
[LUMCAT] PT-22-L61-850-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6437
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	50.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.93 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6048	6273	6477
55	5114	5634	6012
65	3909	4889	5436
75	2717	4336	5359
85	1547	3537	4421

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2460.134	2460.134	2460.134	2460.134	2460.134
5	2468.407	2453.517	2450.208	2441.936	2441.936
10	2435.318	2420.428	2418.774	2410.502	2408.847
15	2377.413	2360.869	2359.214	2355.905	2354.251
20	2294.692	2279.802	2278.147	2279.802	2279.802
25	2178.882	2163.992	2173.918	2180.536	2173.918
30	2036.601	2029.983	2039.910	2051.491	2043.219
35	1872.813	1871.158	1892.666	1900.938	1909.210
40	1684.208	1684.208	1720.605	1735.495	1748.730
45	1469.132	1469.132	1523.728	1558.471	1573.361
50	1242.475	1244.130	1316.925	1363.249	1384.756
55	1007.547	1025.745	1110.121	1159.754	1184.570
60	777.581	813.979	898.354	952.951	979.421
65	567.469	615.447	709.750	769.309	789.162
70	382.173	441.732	536.035	597.249	620.411
75	241.546	299.451	385.482	446.696	476.475
80	130.700	180.333	256.436	299.451	329.231
85	46.324	81.067	105.883	105.883	132.354
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	898.84	N.A.	14.00
0-30	1899.38	N.A.	29.50
0-40	3079.15	N.A.	47.80
0-60	5231.02	N.A.	81.30
0-80	6319.3	N.A.	98.20
0-90	6437.05	N.A.	100.00
10-90	6204.2	N.A.	96.40
20-40	2180.3	N.A.	33.90
20-50	3350.16	N.A.	52.00
40-70	2842.72	N.A.	44.20
60-80	1088.28	N.A.	16.90
70-80	397.43	N.A.	6.20
80-90	117.76	N.A.	1.80
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	6437.05	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	232.85
10-20	665.99
20-30	1000.53
30-40	1179.77
40-50	1169.86
50-60	982.01
60-70	690.85
70-80	397.43
80-90	117.76
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	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	100	91	85	79	97	90	83	78	86	81	76	83	79	75	80	76	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26

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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	17.3	18.9	17.6	19.2	19.5	18.3	19.9	18.7	20.2	20.5
	3H	18.6	20.0	18.9	20.3	20.7	20.1	21.6	20.5	21.9	22.3
	4H	19.0	20.3	19.4	20.7	21.1	20.9	22.3	21.3	22.6	23.0
	6H	19.2	20.5	19.7	20.9	21.3	21.6	22.9	22.0	23.2	23.6
	8H	19.3	20.5	19.7	20.9	21.3	21.8	23.0	22.3	23.4	23.8
	12H	19.3	20.5	19.8	20.9	21.3	22.0	23.1	22.4	23.5	24.0
4H	2H	18.0	19.3	18.4	19.7	20.1	18.8	20.2	19.2	20.5	20.9
	3H	19.5	20.6	19.9	21.0	21.4	20.9	22.0	21.3	22.4	22.8
	4H	20.1	21.1	20.5	21.5	21.9	21.8	22.8	22.2	23.2	23.7
	6H	20.4	21.3	20.9	21.8	22.2	22.7	23.6	23.1	24.0	24.5
	8H	20.5	21.4	21.0	21.8	22.3	23.0	23.8	23.4	24.2	24.7
	12H	20.6	21.4	21.1	21.8	22.3	23.2	23.9	23.6	24.4	24.9
8H	4H	20.5	21.3	21.0	21.8	22.2	22.1	22.9	22.5	23.3	23.8
	6H	21.0	21.7	21.5	22.2	22.7	23.0	23.7	23.5	24.2	24.7
	8H	21.2	21.8	21.7	22.4	22.8	23.4	24.1	24.0	24.6	25.1
	12H	21.3	21.9	21.8	22.4	22.9	23.7	24.3	24.2	24.7	25.3
12H	4H	20.6	21.3	21.1	21.8	22.3	22.1	22.8	22.5	23.3	23.8
	6H	21.2	21.8	21.7	22.3	22.8	23.1	23.7	23.6	24.2	24.7
	8H	21.4	22.0	21.9	22.5	23.0	23.5	24.1	24.0	24.6	25.1

Maximum UGR = 25.3

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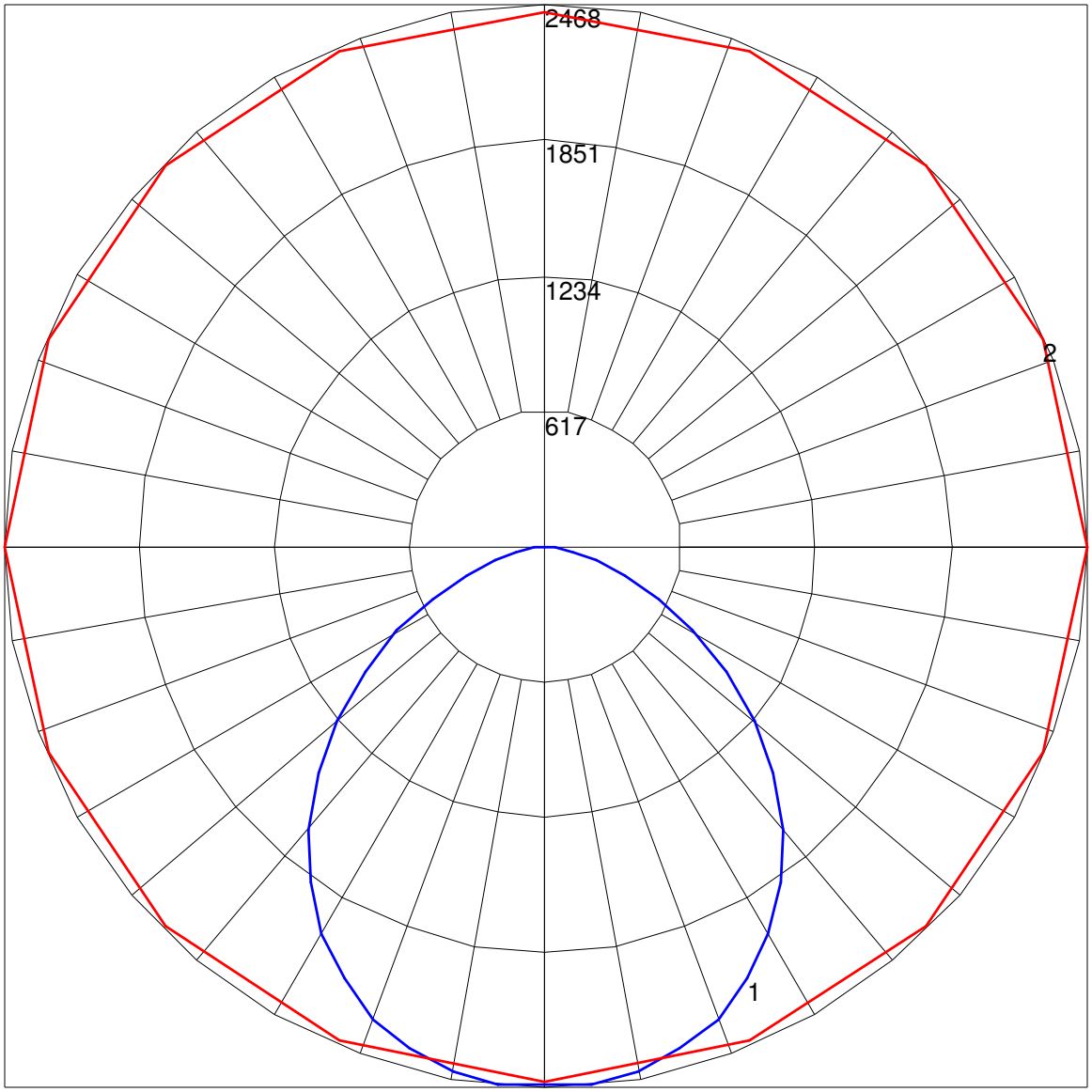
POLAR GRAPH



Maximum Candela = 2468.407 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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