H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-830-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-L43-830-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4152
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	32.2
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	3901	4046	4178
55	3298	3634	3878
65	2521	3153	3506
75	1752	2797	3457
85	998	2281	2851

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1586.767	1586.767	1586.767	1586.767	1586.767
5	1592.103	1582.499	1580.365	1575.029	1575.029
10	1570.761	1561.157	1560.090	1554.755	1553.687
15	1533.413	1522.742	1521.675	1519.540	1518.473
20	1480.058	1470.454	1469.387	1470.454	1470.454
25	1405.362	1395.758	1402.160	1406.429	1402.160
30	1313.592	1309.323	1315.726	1323.195	1317.860
35	1207.949	1206.882	1220.754	1226.090	1231.425
40	1086.301	1086.301	1109.777	1119.381	1127.917
45	947.579	947.579	982.793	1005.202	1014.805
50	801.387	802.454	849.406	879.285	893.157
55	649.860	661.598	716.019	748.032	764.039
60	501.534	525.010	579.432	614.646	631.719
65	366.013	396.959	457.783	496.198	509.003
70	246.498	284.914	345.738	385.221	400.160
75	155.796	193.144	248.633	288.115	307.323
80	84.300	116.313	165.399	193.144	212.352
85	29.879	52.288	68.294	68.294	85.367
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	579.75	N.A.	14.00
0-30	1225.08	N.A.	29.50
0-40	1986.02	N.A.	47.80
0-60	3373.96	N.A.	81.30
0-80	4075.9	N.A.	98.20
0-90	4151.85	N.A.	100.00
10-90	4001.66	N.A.	96.40
20-40	1406.28	N.A.	33.90
20-50	2160.83	N.A.	52.00
40-70	1833.53	N.A.	44.20
60-80	701.93	N.A.	16.90
70-80	256.34	N.A.	6.20
80-90	75.95	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	4151.85	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	150.19
10-20	429.56
20-30	645.34
30-40	760.94
40-50	754.55
50-60	633.39
60-70	445.59
70-80	256.34
80-90	75.95
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	15.7	17.3	16.0	17.6	17.9	16.7	18.3	17.1	18.6	18.9
	3H	17.0	18.4	17.3	18.7	19.1	18.5	20.0	18.9	20.3	20.7
	4H	17.4	18.7	17.8	19.1	19.5	19.3	20.7	19.7	21.0	21.4
	6H	17.6	18.9	18.1	19.3	19.7	20.0	21.3	20.4	21.6	22.0
	8H	17.7	18.9	18.1	19.3	19.7	20.2	21.4	20.7	21.8	22.2
	12H	17.7	18.9	18.2	19.3	19.7	20.4	21.5	20.8	21.9	22.4
4H	2H	16.4	17.7	16.8	18.1	18.5	17.2	18.6	17.6	18.9	19.3
	3H	17.9	19.0	18.3	19.4	19.8	19.3	20.4	19.7	20.8	21.2
	4H	18.5	19.5	18.9	19.9	20.3	20.2	21.2	20.6	21.6	22.1
	6H	18.8	19.7	19.3	20.2	20.6	21.1	22.0	21.5	22.4	22.9
	8H	18.9	19.8	19.4	20.2	20.7	21.4	22.2	21.8	22.6	23.1
	12H	19.0	19.8	19.5	20.2	20.7	21.6	22.3	22.0	22.8	23.3
8H	4H	18.9	19.7	19.4	20.2	20.6	20.5	21.3	20.9	21.7	22.2
	6H	19.4	20.1	19.9	20.6	21.1	21.4	22.1	21.9	22.6	23.1
	8H	19.6	20.2	20.1	20.8	21.2	21.8	22.5	22.4	23.0	23.5
	12H	19.7	20.3	20.2	20.8	21.3	22.1	22.7	22.6	23.1	23.7
12H	4H	19.0	19.7	19.5	20.2	20.7	20.5	21.2	20.9	21.7	22.2
	6H	19.6	20.2	20.1	20.7	21.2	21.5	22.1	22.0	22.6	23.1
	8H	19.8	20.4	20.3	20.9	21.4	21.9	22.5	22.4	23.0	23.5

Maximum UGR = 23.7

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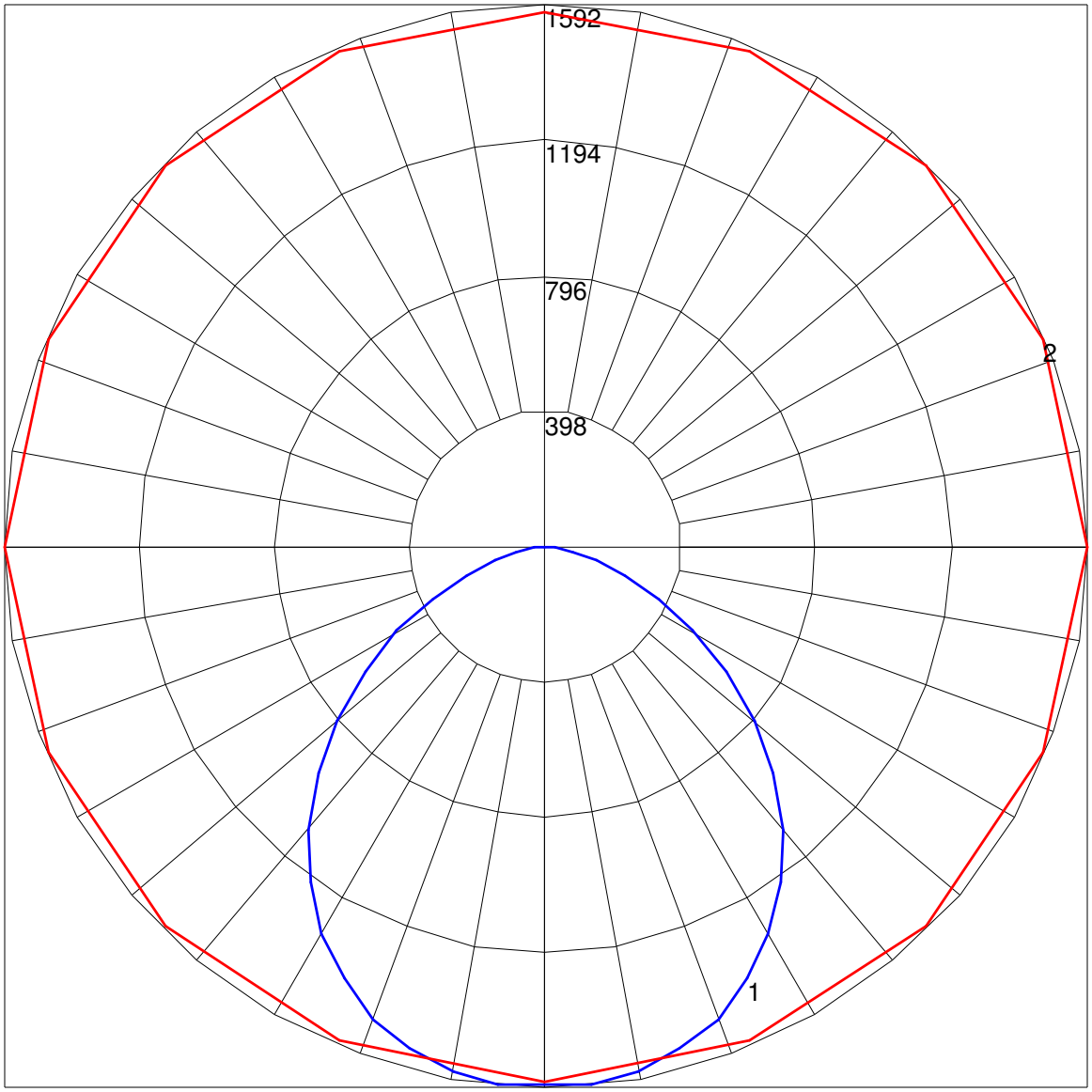
POLAR GRAPH



Maximum Candela = 1592.103 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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