H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-850-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-L43-850-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4445
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	138
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	4177	4332	4473
55	3531	3891	4152
65	2699	3376	3754
75	1876	2994	3701
85	1069	2442	3053

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1698.963	1698.963	1698.963	1698.963	1698.963
5	1704.676	1694.393	1692.108	1686.395	1686.395
10	1681.825	1671.542	1670.399	1664.687	1663.544
15	1641.836	1630.410	1629.268	1626.983	1625.840
20	1584.709	1574.426	1573.283	1574.426	1574.426
25	1504.730	1494.448	1501.303	1505.873	1501.303
30	1406.472	1401.902	1408.757	1416.755	1411.042
35	1293.360	1292.217	1307.070	1312.783	1318.496
40	1163.110	1163.110	1188.246	1198.529	1207.669
45	1014.579	1014.579	1052.283	1076.276	1086.559
50	858.051	859.193	909.465	941.456	956.309
55	695.809	708.377	766.647	800.923	818.062
60	536.996	562.132	620.401	658.105	676.386
65	391.893	425.026	490.151	531.283	544.994
70	263.928	305.059	370.184	412.458	428.454
75	166.811	206.800	266.213	308.487	329.053
80	90.261	124.537	177.094	206.800	227.366
85	31.991	55.985	73.123	73.123	91.404
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	620.74	N.A.	14.00
0-30	1311.71	N.A.	29.50
0-40	2126.45	N.A.	47.80
0-60	3612.53	N.A.	81.30
0-80	4364.09	N.A.	98.20
0-90	4445.41	N.A.	100.00
10-90	4284.61	N.A.	96.40
20-40	1505.71	N.A.	33.90
20-50	2313.61	N.A.	52.00
40-70	1963.18	N.A.	44.20
60-80	751.57	N.A.	16.90
70-80	274.46	N.A.	6.20
80-90	81.32	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	4445.41	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	160.81
10-20	459.93
20-30	690.97
30-40	814.75
40-50	807.90
50-60	678.18
60-70	477.10
70-80	274.46
80-90	81.32
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	34	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	16.0	17.6	16.3	17.9	18.2	17.0	18.6	17.4	18.9	19.2
	3H	17.3	18.7	17.6	19.0	19.4	18.8	20.3	19.2	20.6	21.0
	4H	17.7	19.0	18.1	19.4	19.8	19.6	21.0	20.0	21.3	21.7
	6H	17.9	19.2	18.4	19.6	20.0	20.3	21.6	20.7	21.9	22.3
	8H	18.0	19.2	18.4	19.6	20.0	20.5	21.7	21.0	22.1	22.5
	12H	18.0	19.2	18.5	19.6	20.0	20.7	21.8	21.1	22.2	22.7
4H	2H	16.7	18.0	17.1	18.4	18.8	17.5	18.9	17.9	19.2	19.6
	3H	18.2	19.3	18.6	19.7	20.1	19.6	20.7	20.0	21.1	21.5
	4H	18.8	19.8	19.2	20.2	20.6	20.5	21.5	20.9	21.9	22.4
	6H	19.1	20.0	19.6	20.5	20.9	21.4	22.3	21.8	22.7	23.2
	8H	19.2	20.1	19.7	20.5	21.0	21.7	22.5	22.1	22.9	23.4
	12H	19.3	20.1	19.8	20.5	21.0	21.9	22.6	22.4	23.1	23.6
8H	4H	19.2	20.0	19.7	20.5	21.0	20.8	21.6	21.2	22.0	22.5
	6H	19.7	20.4	20.2	20.9	21.4	21.7	22.4	22.2	22.9	23.4
	8H	19.9	20.5	20.4	21.1	21.5	22.1	22.8	22.7	23.3	23.8
	12H	20.0	20.6	20.5	21.1	21.6	22.4	23.0	22.9	23.4	24.0
12H	4H	19.3	20.0	19.8	20.5	21.0	20.8	21.5	21.2	22.0	22.5
	6H	19.9	20.5	20.4	21.0	21.5	21.8	22.4	22.3	22.9	23.4
	8H	20.1	20.7	20.6	21.2	21.7	22.2	22.8	22.7	23.3	23.8

Maximum UGR = 24.0

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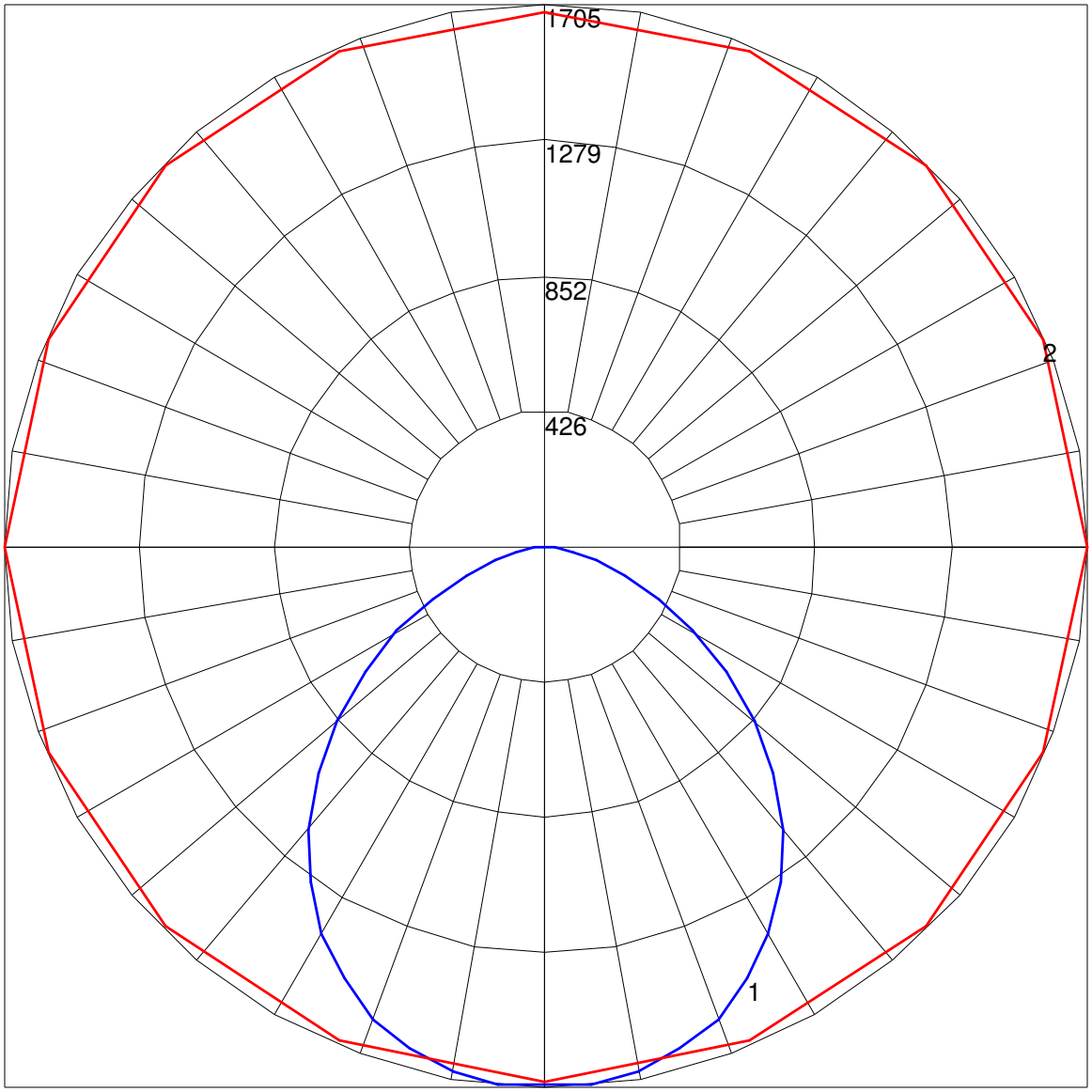
POLAR GRAPH



Maximum Candela = 1704.676 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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