H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-927-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-L52-927-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4371
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
Total Luminaire Watts	41.6
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	4107	4260	4399
55	3473	3826	4083
65	2654	3320	3691
75	1845	2944	3639
85	1051	2402	3002

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1670.600	1670.600	1670.600	1670.600	1670.600
5	1676.217	1666.106	1663.859	1658.242	1658.242
10	1653.748	1643.637	1642.513	1636.896	1635.772
15	1614.426	1603.192	1602.068	1599.821	1598.698
20	1558.253	1548.142	1547.018	1548.142	1548.142
25	1479.610	1469.499	1476.240	1480.733	1476.240
30	1382.992	1378.498	1385.238	1393.103	1387.485
35	1271.768	1270.645	1285.250	1290.867	1296.484
40	1143.692	1143.692	1168.409	1178.520	1187.508
45	997.641	997.641	1034.716	1058.309	1068.420
50	843.726	844.849	894.282	925.739	940.344
55	684.193	696.551	753.848	787.552	804.404
60	528.031	552.747	610.044	647.119	665.094
65	385.350	417.931	481.969	522.414	535.895
70	259.522	299.966	364.004	405.573	421.301
75	164.027	203.348	261.768	303.337	323.559
80	88.754	122.458	174.138	203.348	223.571
85	31.457	55.050	71.902	71.902	89.878
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	610.38	N.A.	14.00
0-30	1289.81	N.A.	29.50
0-40	2090.95	N.A.	47.80
0-60	3552.22	N.A.	81.30
0-80	4291.24	N.A.	98.20
0-90	4371.2	N.A.	100.00
10-90	4213.08	N.A.	96.40
20-40	1480.57	N.A.	33.90
20-50	2274.99	N.A.	52.00
40-70	1930.4	N.A.	44.20
60-80	739.02	N.A.	16.90
70-80	269.88	N.A.	6.20
80-90	79.96	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	4371.2	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	158.12
10-20	452.26
20-30	679.43
30-40	801.14
40-50	794.41
50-60	666.85
60-70	469.14
70-80	269.88
80-90	79.96
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	15.9	17.5	16.2	17.8	18.1	16.9	18.5	17.3	18.8	19.1
	3H	17.2	18.6	17.5	18.9	19.3	18.7	20.2	19.1	20.5	20.9
	4H	17.6	18.9	18.0	19.3	19.7	19.5	20.9	19.9	21.2	21.6
	6H	17.8	19.1	18.3	19.5	19.9	20.2	21.5	20.6	21.8	22.2
	8H	17.9	19.1	18.3	19.5	19.9	20.4	21.6	20.9	22.0	22.4
	12H	17.9	19.1	18.4	19.5	19.9	20.6	21.7	21.0	22.1	22.6
4H	2H	16.6	17.9	17.0	18.3	18.7	17.4	18.8	17.8	19.1	19.5
	3H	18.1	19.2	18.5	19.6	20.0	19.5	20.6	19.9	21.0	21.4
	4H	18.7	19.7	19.1	20.1	20.5	20.4	21.4	20.8	21.8	22.3
	6H	19.0	19.9	19.5	20.4	20.8	21.3	22.2	21.7	22.6	23.1
	8H	19.1	20.0	19.6	20.4	20.9	21.6	22.4	22.0	22.8	23.3
	12H	19.2	20.0	19.7	20.4	20.9	21.8	22.5	22.3	23.0	23.5
8H	4H	19.1	19.9	19.6	20.4	20.9	20.7	21.5	21.1	21.9	22.4
	6H	19.6	20.3	20.1	20.8	21.3	21.6	22.3	22.1	22.8	23.3
	8H	19.8	20.4	20.3	21.0	21.4	22.0	22.7	22.6	23.2	23.7
	12H	19.9	20.5	20.4	21.0	21.5	22.3	22.9	22.8	23.3	23.9
12H	4H	19.2	19.9	19.7	20.4	20.9	20.7	21.4	21.1	21.9	22.4
	6H	19.8	20.4	20.3	20.9	21.4	21.7	22.3	22.2	22.8	23.3
	8H	20.0	20.6	20.5	21.1	21.6	22.1	22.7	22.6	23.2	23.7

Maximum UGR = 23.9

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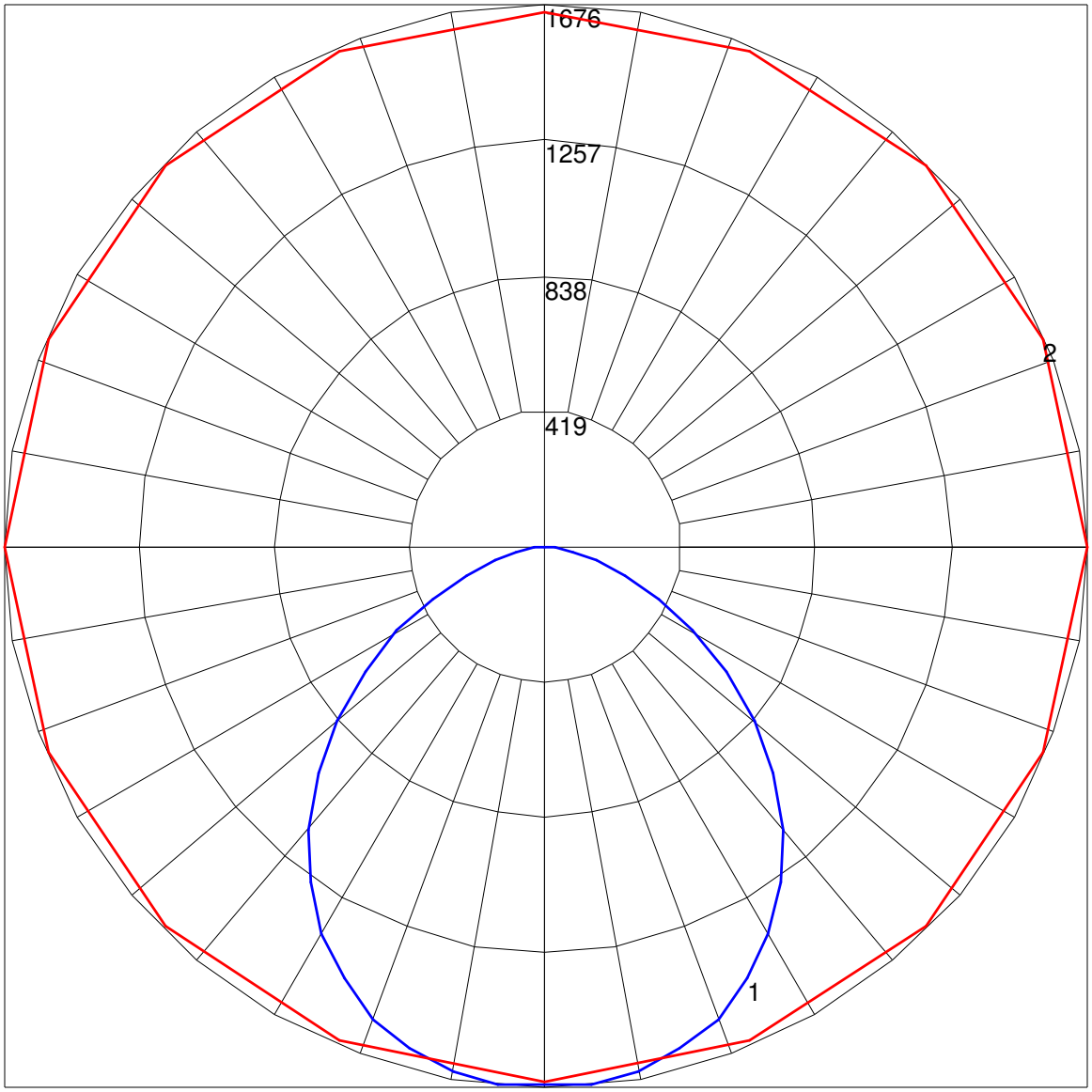
POLAR GRAPH



Maximum Candela = 1676.217 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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