H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-940-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-L52-940-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4584
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	110
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	4308	4468	4613
55	3642	4013	4282
65	2784	3482	3871
75	1935	3088	3817
85	1102	2519	3148

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1752.092	1752.092	1752.092	1752.092	1752.092
5	1757.983	1747.379	1745.022	1739.131	1739.131
10	1734.418	1723.813	1722.635	1716.744	1715.565
15	1693.178	1681.396	1680.217	1677.861	1676.682
20	1634.265	1623.660	1622.482	1623.660	1623.660
25	1551.785	1541.181	1548.251	1552.964	1548.251
30	1450.454	1445.741	1452.811	1461.058	1455.167
35	1333.805	1332.627	1347.944	1353.836	1359.727
40	1199.482	1199.482	1225.404	1236.008	1245.435
45	1046.306	1046.306	1085.189	1109.933	1120.538
50	884.883	886.061	937.905	970.897	986.214
55	717.568	730.529	790.621	825.969	843.643
60	553.788	579.710	639.802	678.685	697.538
65	404.148	438.318	505.479	547.897	562.036
70	272.181	314.599	381.760	425.357	441.852
75	172.028	213.267	274.538	318.134	339.343
80	93.084	128.432	182.632	213.267	234.476
85	32.992	57.735	75.409	75.409	94.262
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	640.15	N.A.	14.00
0-30	1352.72	N.A.	29.50
0-40	2192.95	N.A.	47.80
0-60	3725.5	N.A.	81.30
0-80	4500.56	N.A.	98.20
0-90	4584.43	N.A.	100.00
10-90	4418.59	N.A.	96.40
20-40	1552.8	N.A.	33.90
20-50	2385.96	N.A.	52.00
40-70	2024.57	N.A.	44.20
60-80	775.07	N.A.	16.90
70-80	283.05	N.A.	6.20
80-90	83.86	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	4584.43	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	165.83
10-20	474.32
20-30	712.57
30-40	840.22
40-50	833.16
50-60	699.38
60-70	492.02
70-80	283.05
80-90	83.86
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	16.1	17.7	16.4	18.0	18.3	17.1	18.7	17.5	19.0	19.3
	3H	17.4	18.8	17.7	19.1	19.5	18.9	20.4	19.3	20.7	21.1
	4H	17.8	19.1	18.2	19.5	19.9	19.7	21.1	20.1	21.4	21.8
	6H	18.0	19.3	18.5	19.7	20.1	20.4	21.7	20.8	22.0	22.4
	8H	18.1	19.3	18.5	19.7	20.1	20.6	21.8	21.1	22.2	22.6
	12H	18.1	19.3	18.6	19.7	20.1	20.8	21.9	21.2	22.3	22.8
4H	2H	16.8	18.1	17.2	18.5	18.9	17.6	19.0	18.0	19.3	19.7
	3H	18.3	19.4	18.7	19.8	20.2	19.7	20.8	20.1	21.2	21.6
	4H	18.9	19.9	19.3	20.3	20.7	20.6	21.6	21.0	22.0	22.5
	6H	19.2	20.1	19.7	20.6	21.0	21.5	22.4	21.9	22.8	23.3
	8H	19.3	20.2	19.8	20.6	21.1	21.8	22.6	22.2	23.0	23.5
	12H	19.4	20.2	19.9	20.6	21.1	22.0	22.7	22.5	23.2	23.7
8H	4H	19.3	20.1	19.8	20.6	21.1	20.9	21.7	21.3	22.1	22.6
	6H	19.8	20.5	20.3	21.0	21.5	21.8	22.5	22.3	23.0	23.5
	8H	20.0	20.6	20.5	21.2	21.6	22.2	22.9	22.8	23.4	23.9
	12H	20.1	20.7	20.6	21.2	21.7	22.5	23.1	23.0	23.5	24.1
12H	4H	19.4	20.1	19.9	20.6	21.1	20.9	21.6	21.3	22.1	22.6
	6H	20.0	20.6	20.5	21.1	21.6	21.9	22.5	22.4	23.0	23.5
	8H	20.2	20.8	20.7	21.3	21.8	22.3	22.9	22.8	23.4	23.9

Maximum UGR = 24.1

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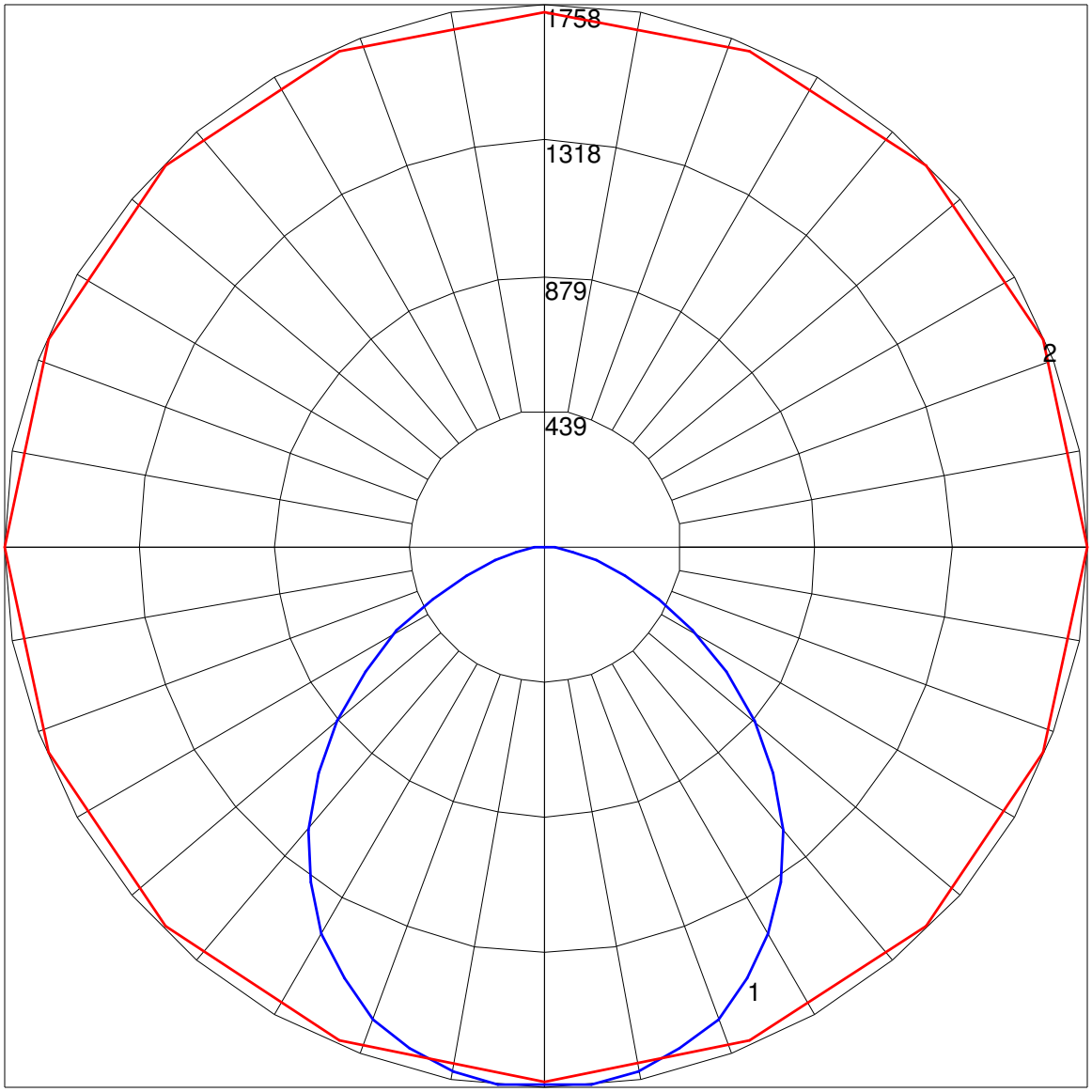
POLAR GRAPH



Maximum Candela = 1757.983 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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