H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-930-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-L52-930-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4425
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
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	4157	4312	4452
55	3515	3873	4132
65	2687	3360	3736
75	1867	2980	3684
85	1064	2431	3039

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1690.972	1690.972	1690.972	1690.972	1690.972
5	1696.658	1686.423	1684.149	1678.463	1678.463
10	1673.914	1663.680	1662.542	1656.857	1655.719
15	1634.113	1622.742	1621.604	1619.330	1618.193
20	1577.255	1567.020	1565.883	1567.020	1567.020
25	1497.653	1487.418	1494.241	1498.790	1494.241
30	1399.856	1395.308	1402.131	1410.091	1404.405
35	1287.276	1286.139	1300.922	1306.608	1312.294
40	1157.639	1157.639	1182.657	1192.891	1201.989
45	1009.807	1009.807	1047.334	1071.214	1081.449
50	854.015	855.152	905.187	937.028	951.811
55	692.537	705.045	763.041	797.156	814.214
60	534.470	559.488	617.483	655.010	673.205
65	390.049	423.027	487.846	528.784	542.430
70	262.686	303.624	368.443	410.518	426.439
75	166.027	205.828	264.961	307.036	327.505
80	89.836	123.952	176.261	205.828	226.297
85	31.841	55.721	72.779	72.779	90.974
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	617.82	N.A.	14.00
0-30	1305.54	N.A.	29.50
0-40	2116.45	N.A.	47.80
0-60	3595.54	N.A.	81.30
0-80	4343.57	N.A.	98.20
0-90	4424.5	N.A.	100.00
10-90	4264.46	N.A.	96.40
20-40	1498.63	N.A.	33.90
20-50	2302.73	N.A.	52.00
40-70	1953.94	N.A.	44.20
60-80	748.03	N.A.	16.90
70-80	273.17	N.A.	6.20
80-90	80.94	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	4424.5	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	160.05
10-20	457.77
20-30	687.72
30-40	810.91
40-50	804.10
50-60	674.99
60-70	474.86
70-80	273.17
80-90	80.94
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	99	91	85	79	97	90	83	78	86	81	76	83	78	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	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	22.3	23.1	23.6
8H	4H	19.2	20.0	19.7	20.5	20.9	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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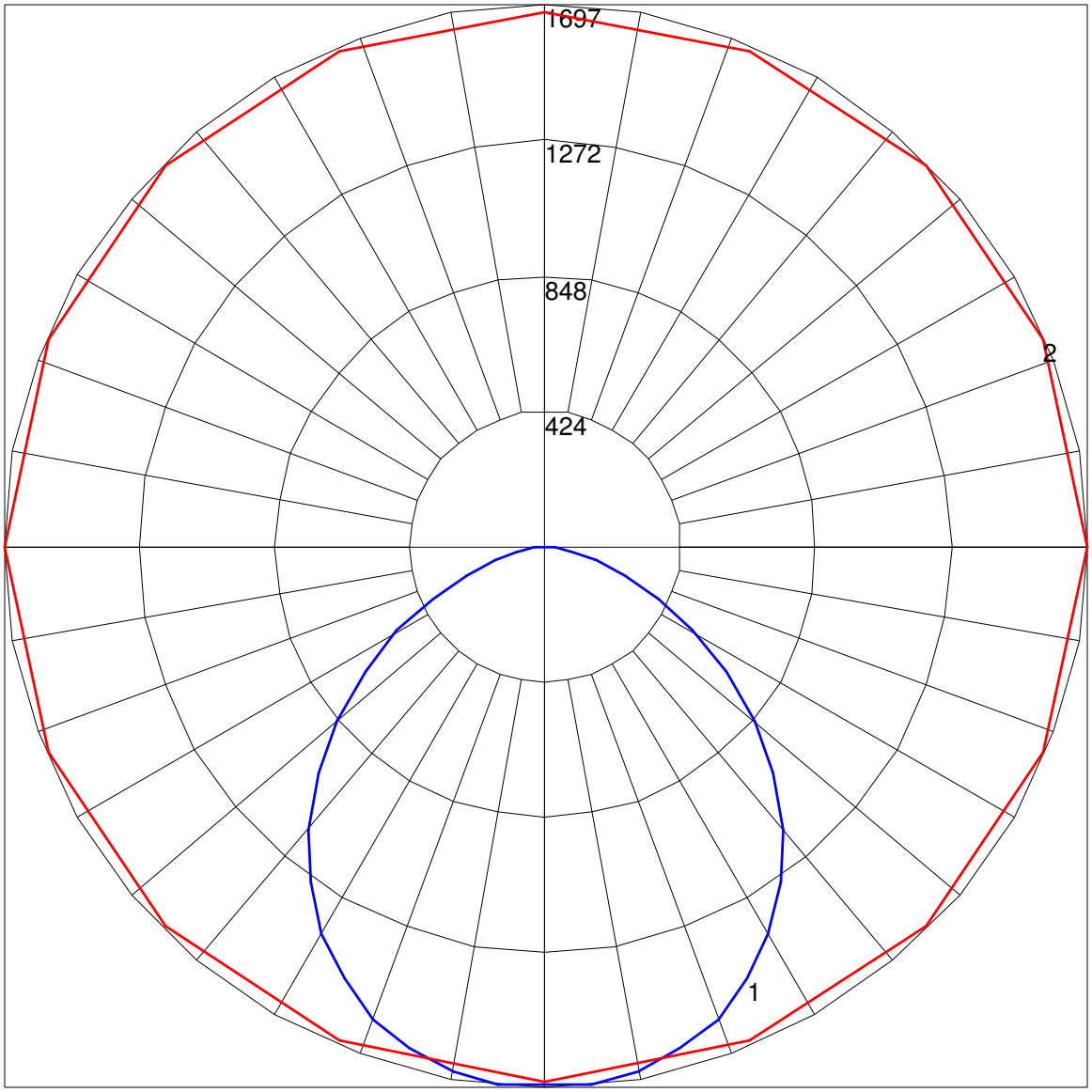
POLAR GRAPH



Maximum Candela = 1696.658 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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