H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-830-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] BALLABS TEST NO. 20789.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1-84 LED 22"ARRAY 2x2 LUMINAIRE
[MORE] WHITE REFLECTOR w/FROST SQUARED RIBBED LENS
[MORE] ADVANCE #C1042C092V045CNN1
[LUMCAT] PT-22-L43-830-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4277
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	32.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3823	3767	3714
55	3436	3467	3563
65	3007	3280	3683
75	2344	3302	4269
85	1219	3074	4141

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1695.027	1695.027	1695.027	1695.027	1695.027
5	1695.027	1684.091	1677.061	1677.842	1676.280
10	1659.095	1650.503	1643.473	1640.348	1638.005
15	1600.511	1594.262	1586.451	1580.202	1578.640
20	1534.116	1523.962	1505.215	1501.309	1497.404
25	1437.258	1433.352	1411.481	1400.545	1393.515
30	1327.120	1320.871	1306.030	1288.845	1277.128
35	1202.922	1204.484	1185.737	1168.553	1161.523
40	1075.600	1079.505	1060.759	1049.042	1044.355
45	953.745	951.402	939.685	935.780	926.406
50	824.080	826.423	815.487	824.861	817.050
55	695.195	702.225	701.444	720.972	720.972
60	568.654	573.341	593.650	620.208	631.925
65	448.362	460.079	488.980	527.255	549.126
70	326.507	346.816	395.246	444.456	471.014
75	214.026	249.958	301.512	358.533	389.778
80	113.262	153.880	211.683	267.924	296.825
85	37.494	62.489	94.515	115.605	127.322
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	606.59	N.A.	14.20
0-30	1257.73	N.A.	29.40
0-40	1999.35	N.A.	46.70
0-60	3361.1	N.A.	78.60
0-80	4171.56	N.A.	97.50
0-90	4276.94	N.A.	100.00
10-90	4117.57	N.A.	96.30
20-40	1392.76	N.A.	32.60
20-50	2120.18	N.A.	49.60
40-70	1852.27	N.A.	43.30
60-80	810.46	N.A.	18.90
70-80	319.94	N.A.	7.50
80-90	105.38	N.A.	2.50
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	4276.94	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	159.37
10-20	447.22
20-30	651.14
30-40	741.62
40-50	727.42
50-60	634.34
60-70	490.51
70-80	319.94
80-90	105.38
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	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	80	72	65	88	78	71	64	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	51
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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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	16.4	17.9	18.2	16.4	18.0	16.7	18.3	18.6
	3H	17.6	19.1	18.0	19.4	19.8	18.6	20.1	19.0	20.4	20.8
	4H	18.2	19.6	18.6	19.9	20.3	19.7	21.1	20.1	21.4	21.8
	6H	18.6	19.8	19.0	20.2	20.6	20.7	22.0	21.1	22.4	22.8
	8H	18.7	19.9	19.1	20.3	20.7	21.1	22.3	21.5	22.7	23.1
	12H	18.7	19.9	19.1	20.3	20.7	21.4	22.5	21.8	22.9	23.4
4H	2H	16.7	18.0	17.1	18.4	18.8	17.0	18.4	17.4	18.7	19.1
	3H	18.5	19.7	19.0	20.1	20.5	19.5	20.7	19.9	21.0	21.4
	4H	19.3	20.3	19.7	20.7	21.2	20.7	21.8	21.2	22.2	22.6
	6H	19.8	20.7	20.2	21.2	21.6	21.9	22.9	22.4	23.3	23.8
	8H	19.9	20.8	20.4	21.2	21.7	22.4	23.3	22.9	23.7	24.2
	12H	20.0	20.8	20.5	21.3	21.7	22.7	23.5	23.2	24.0	24.4
8H	4H	19.8	20.7	20.2	21.1	21.6	21.0	21.9	21.5	22.4	22.8
	6H	20.5	21.2	21.0	21.7	22.2	22.4	23.2	22.9	23.6	24.1
	8H	20.7	21.3	21.2	21.8	22.3	23.0	23.6	23.5	24.2	24.6
	12H	20.8	21.4	21.3	21.9	22.5	23.4	24.0	23.9	24.5	25.0
12H	4H	19.9	20.7	20.4	21.2	21.6	21.1	21.9	21.5	22.3	22.8
	6H	20.6	21.3	21.2	21.8	22.3	22.5	23.2	23.0	23.6	24.1
	8H	20.9	21.5	21.4	22.0	22.6	23.1	23.7	23.6	24.2	24.7

Maximum UGR = 25.0

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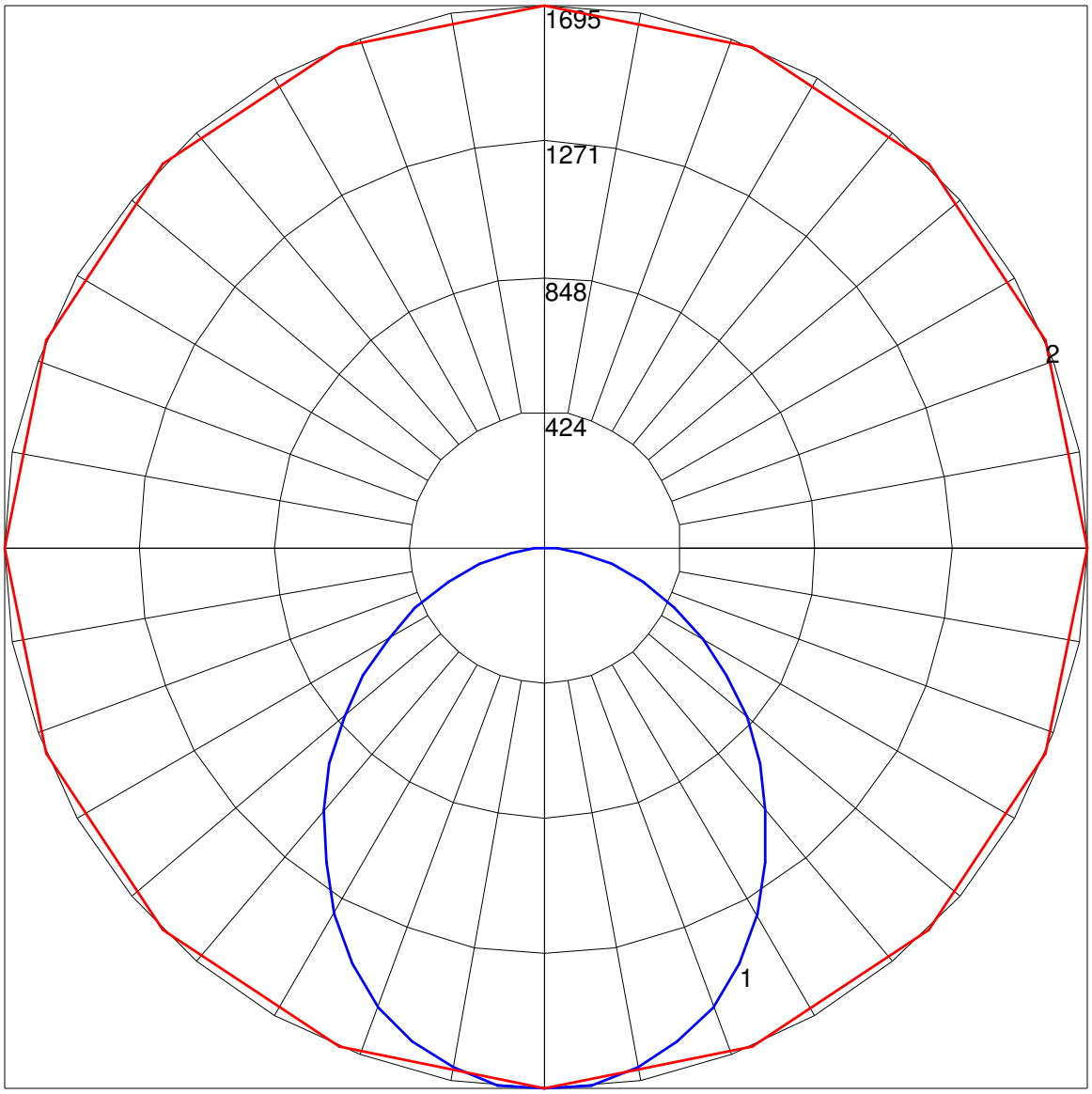
POLAR GRAPH



Maximum Candela = 1695.027 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

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