H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-835-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-L43-835-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4320
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	134
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	3862	3805	3751
55	3470	3502	3599
65	3038	3313	3720
75	2368	3336	4312
85	1232	3105	4183

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1712.148	1712.148	1712.148	1712.148	1712.148
5	1712.148	1701.102	1694.001	1694.790	1693.212
10	1675.853	1667.174	1660.073	1656.917	1654.550
15	1616.678	1610.366	1602.476	1596.164	1594.586
20	1549.612	1539.355	1520.419	1516.474	1512.529
25	1451.775	1447.830	1425.738	1414.692	1407.591
30	1340.525	1334.213	1319.222	1301.864	1290.028
35	1215.073	1216.651	1197.714	1180.356	1173.255
40	1086.464	1090.409	1071.473	1059.638	1054.904
45	963.379	961.012	949.177	945.232	935.764
50	832.404	834.771	823.725	833.193	825.303
55	702.217	709.318	708.529	728.255	728.255
60	574.398	579.132	599.646	626.473	638.308
65	452.891	464.726	493.919	532.581	554.673
70	329.805	350.320	399.238	448.946	475.772
75	216.188	252.483	304.557	362.155	393.715
80	114.406	155.435	213.821	270.630	299.823
85	37.872	63.121	95.470	116.773	128.608
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	612.72	N.A.	14.20
0-30	1270.43	N.A.	29.40
0-40	2019.54	N.A.	46.70
0-60	3395.05	N.A.	78.60
0-80	4213.7	N.A.	97.50
0-90	4320.14	N.A.	100.00
10-90	4159.16	N.A.	96.30
20-40	1406.82	N.A.	32.60
20-50	2141.59	N.A.	49.60
40-70	1870.98	N.A.	43.30
60-80	818.64	N.A.	18.90
70-80	323.18	N.A.	7.50
80-90	106.45	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	4320.14	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	160.98
10-20	451.73
20-30	657.71
30-40	749.11
40-50	734.77
50-60	640.74
60-70	495.47
70-80	323.18
80-90	106.45
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	16.1	17.7	16.5	18.0	18.3	16.5	18.1	16.8	18.4	18.7
	3H	17.7	19.2	18.1	19.5	19.9	18.7	20.2	19.1	20.5	20.9
	4H	18.3	19.7	18.7	20.0	20.4	19.8	21.2	20.2	21.5	21.9
	6H	18.7	19.9	19.1	20.3	20.7	20.8	22.1	21.2	22.5	22.9
	8H	18.8	20.0	19.2	20.4	20.8	21.2	22.4	21.6	22.8	23.2
	12H	18.8	20.0	19.2	20.4	20.8	21.5	22.6	21.9	23.0	23.5
4H	2H	16.8	18.1	17.2	18.5	18.9	17.1	18.5	17.5	18.8	19.2
	3H	18.6	19.8	19.1	20.2	20.6	19.6	20.8	20.0	21.1	21.5
	4H	19.4	20.4	19.8	20.8	21.3	20.8	21.9	21.3	22.3	22.7
	6H	19.9	20.8	20.3	21.3	21.7	22.0	23.0	22.5	23.4	23.9
	8H	20.0	20.9	20.5	21.3	21.8	22.5	23.4	23.0	23.8	24.3
	12H	20.1	20.9	20.6	21.4	21.8	22.8	23.6	23.3	24.1	24.5
8H	4H	19.9	20.8	20.3	21.2	21.7	21.1	22.0	21.6	22.5	22.9
	6H	20.6	21.3	21.1	21.8	22.3	22.5	23.3	23.0	23.7	24.2
	8H	20.8	21.4	21.3	21.9	22.4	23.1	23.7	23.6	24.3	24.7
	12H	20.9	21.5	21.4	22.0	22.6	23.5	24.1	24.0	24.6	25.1
12H	4H	20.0	20.8	20.5	21.3	21.7	21.2	22.0	21.6	22.4	22.9
	6H	20.7	21.4	21.3	21.9	22.4	22.6	23.3	23.1	23.7	24.2
	8H	21.0	21.6	21.5	22.1	22.7	23.2	23.8	23.7	24.3	24.8

Maximum UGR = 25.1

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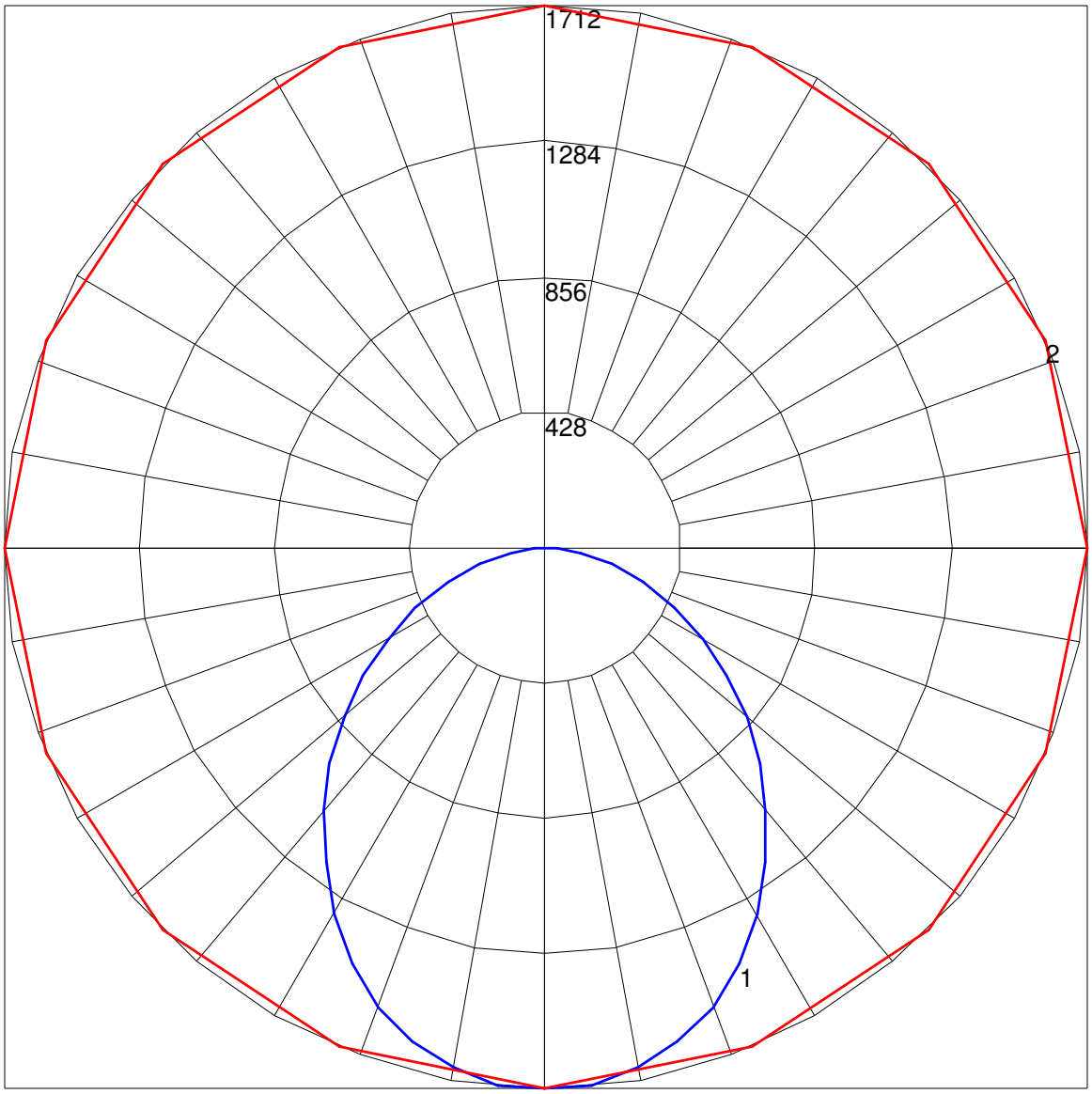
POLAR GRAPH



Maximum Candela = 1712.148 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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