H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L26-835-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-L26-835-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3012
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	140
Total Luminaire Watts	21.5
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	2693	2653	2615
55	2419	2441	2509
65	2118	2310	2594
75	1651	2326	3006
85	859	2165	2916

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1193.686	1193.686	1193.686	1193.686	1193.686
5	1193.686	1185.985	1181.034	1181.584	1180.484
10	1168.382	1162.331	1157.380	1155.180	1153.530
15	1127.126	1122.725	1117.224	1112.824	1111.723
20	1080.368	1073.217	1060.015	1057.265	1054.514
25	1012.158	1009.407	994.005	986.304	981.353
30	934.596	930.195	919.743	907.642	899.390
35	847.132	848.232	835.030	822.928	817.978
40	757.468	760.219	747.016	738.765	735.465
45	671.655	670.004	661.753	659.003	652.402
50	580.341	581.991	574.290	580.891	575.390
55	489.576	494.527	493.977	507.729	507.729
60	400.462	403.763	418.065	436.768	445.019
65	315.749	324.001	344.354	371.308	386.710
70	229.936	244.238	278.343	312.999	331.702
75	150.724	176.027	212.333	252.489	274.493
80	79.762	108.367	149.073	188.679	209.033
85	26.404	44.007	66.560	81.413	89.664
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	427.18	N.A.	14.20
0-30	885.73	N.A.	29.40
0-40	1408.00	N.A.	46.70
0-60	2366.99	N.A.	78.60
0-80	2937.73	N.A.	97.50
0-90	3011.94	N.A.	100.00
10-90	2899.71	N.A.	96.30
20-40	980.82	N.A.	32.60
20-50	1493.09	N.A.	49.60
40-70	1304.42	N.A.	43.30
60-80	570.75	N.A.	18.90
70-80	225.31	N.A.	7.50
80-90	74.21	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	3011.94	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	112.24
10-20	314.94
20-30	458.55
30-40	522.27
40-50	512.27
50-60	446.72
60-70	345.43
70-80	225.31
80-90	74.21
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	14.8	16.4	15.2	16.7	17.0	15.2	16.8	15.5	17.1	17.4
	3H	16.4	17.9	16.8	18.2	18.6	17.4	18.9	17.8	19.2	19.6
	4H	17.0	18.4	17.4	18.7	19.1	18.5	19.9	18.9	20.2	20.6
	6H	17.4	18.6	17.8	19.0	19.4	19.5	20.8	19.9	21.2	21.6
	8H	17.5	18.7	17.9	19.1	19.5	19.9	21.1	20.3	21.5	21.9
	12H	17.5	18.7	17.9	19.1	19.5	20.2	21.3	20.6	21.7	22.2
4H	2H	15.5	16.8	15.9	17.2	17.6	15.8	17.2	16.2	17.5	17.9
	3H	17.3	18.5	17.8	18.9	19.3	18.3	19.5	18.7	19.8	20.2
	4H	18.1	19.1	18.5	19.5	20.0	19.5	20.6	20.0	21.0	21.4
	6H	18.6	19.5	19.0	20.0	20.4	20.7	21.7	21.2	22.1	22.6
	8H	18.7	19.6	19.2	20.0	20.5	21.2	22.1	21.7	22.5	23.0
	12H	18.8	19.6	19.3	20.1	20.5	21.5	22.3	22.0	22.8	23.2
8H	4H	18.6	19.5	19.0	19.9	20.4	19.8	20.7	20.3	21.2	21.6
	6H	19.3	20.0	19.8	20.5	21.0	21.2	22.0	21.7	22.4	22.9
	8H	19.5	20.1	20.0	20.6	21.1	21.8	22.4	22.3	23.0	23.4
	12H	19.6	20.2	20.1	20.7	21.3	22.2	22.8	22.7	23.3	23.8
12H	4H	18.7	19.5	19.2	20.0	20.4	19.9	20.7	20.3	21.1	21.6
	6H	19.4	20.1	20.0	20.6	21.1	21.3	22.0	21.8	22.4	22.9
	8H	19.7	20.3	20.2	20.8	21.4	21.9	22.5	22.4	23.0	23.5

Maximum UGR = 23.8

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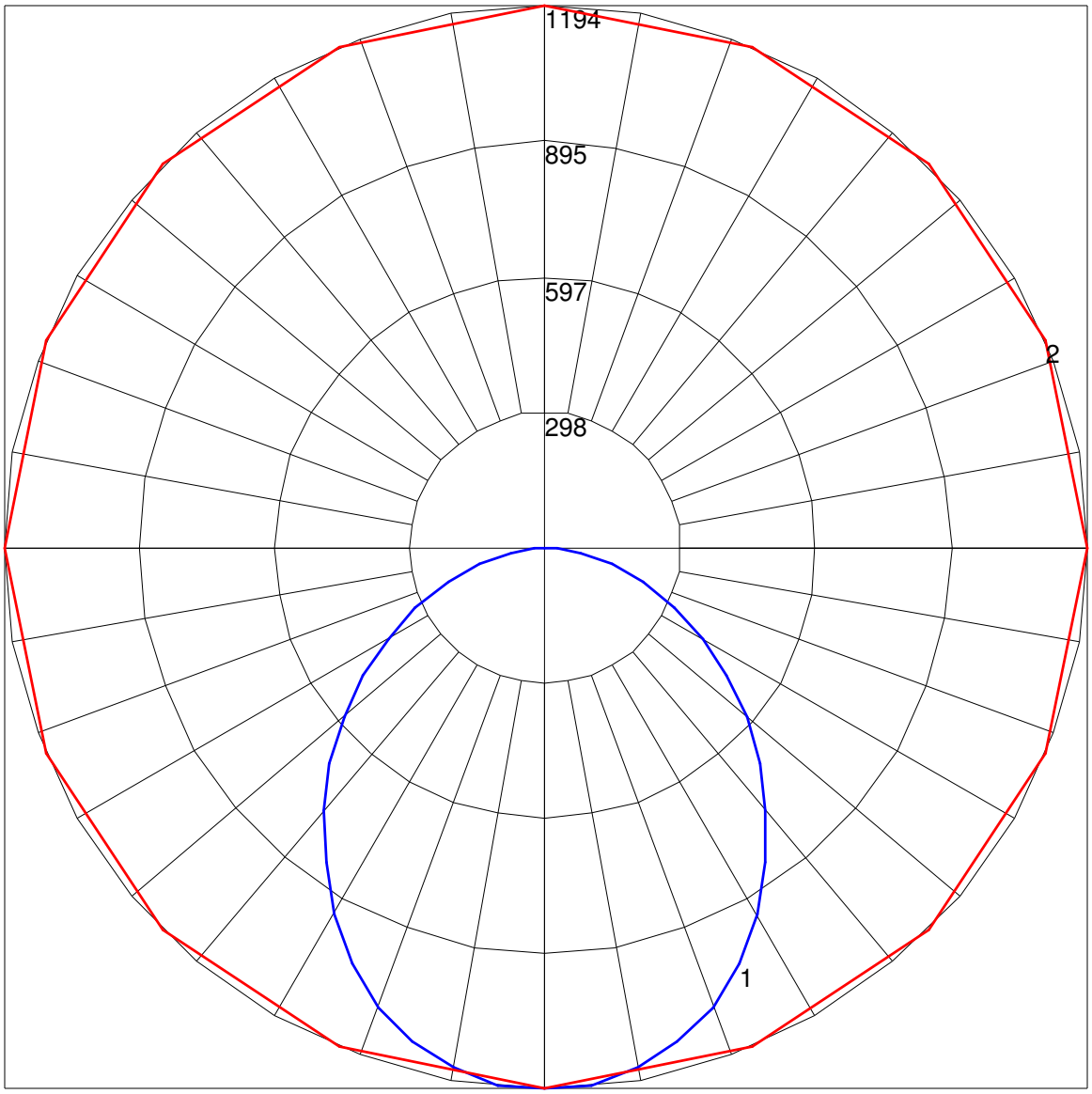
POLAR GRAPH



Maximum Candela = 1193.686 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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