H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L26-830-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-L26-830-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2982
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	139
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	2666	2626	2589
55	2395	2417	2484
65	2097	2287	2568
75	1634	2302	2976
85	850	2143	2887

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1181.749	1181.749	1181.749	1181.749	1181.749
5	1181.749	1174.125	1169.224	1169.769	1168.679
10	1156.699	1150.708	1145.807	1143.628	1141.995
15	1115.855	1111.498	1106.052	1101.695	1100.606
20	1069.565	1062.485	1049.415	1046.692	1043.969
25	1002.036	999.313	984.065	976.441	971.540
30	925.250	920.893	910.546	898.565	890.396
35	838.661	839.750	826.680	814.699	809.798
40	749.894	752.616	739.546	731.378	728.110
45	664.938	663.305	655.136	652.413	645.878
50	574.537	576.171	568.547	575.082	569.636
55	484.681	489.582	489.037	502.652	502.652
60	396.458	399.725	413.885	432.400	440.569
65	312.592	320.761	340.910	367.595	382.843
70	227.637	241.796	275.560	309.869	328.385
75	149.216	174.267	210.210	249.965	271.748
80	78.965	107.283	147.583	186.793	206.942
85	26.140	43.567	65.895	80.599	88.767
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	422.91	N.A.	14.20
0-30	876.87	N.A.	29.40
0-40	1393.92	N.A.	46.70
0-60	2343.32	N.A.	78.60
0-80	2908.35	N.A.	97.50
0-90	2981.82	N.A.	100.00
10-90	2870.71	N.A.	96.30
20-40	971.01	N.A.	32.60
20-50	1478.16	N.A.	49.60
40-70	1291.38	N.A.	43.30
60-80	565.04	N.A.	18.90
70-80	223.06	N.A.	7.50
80-90	73.47	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	2981.82	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	111.11
10-20	311.79
20-30	453.96
30-40	517.05
40-50	507.15
50-60	442.25
60-70	341.98
70-80	223.06
80-90	73.47
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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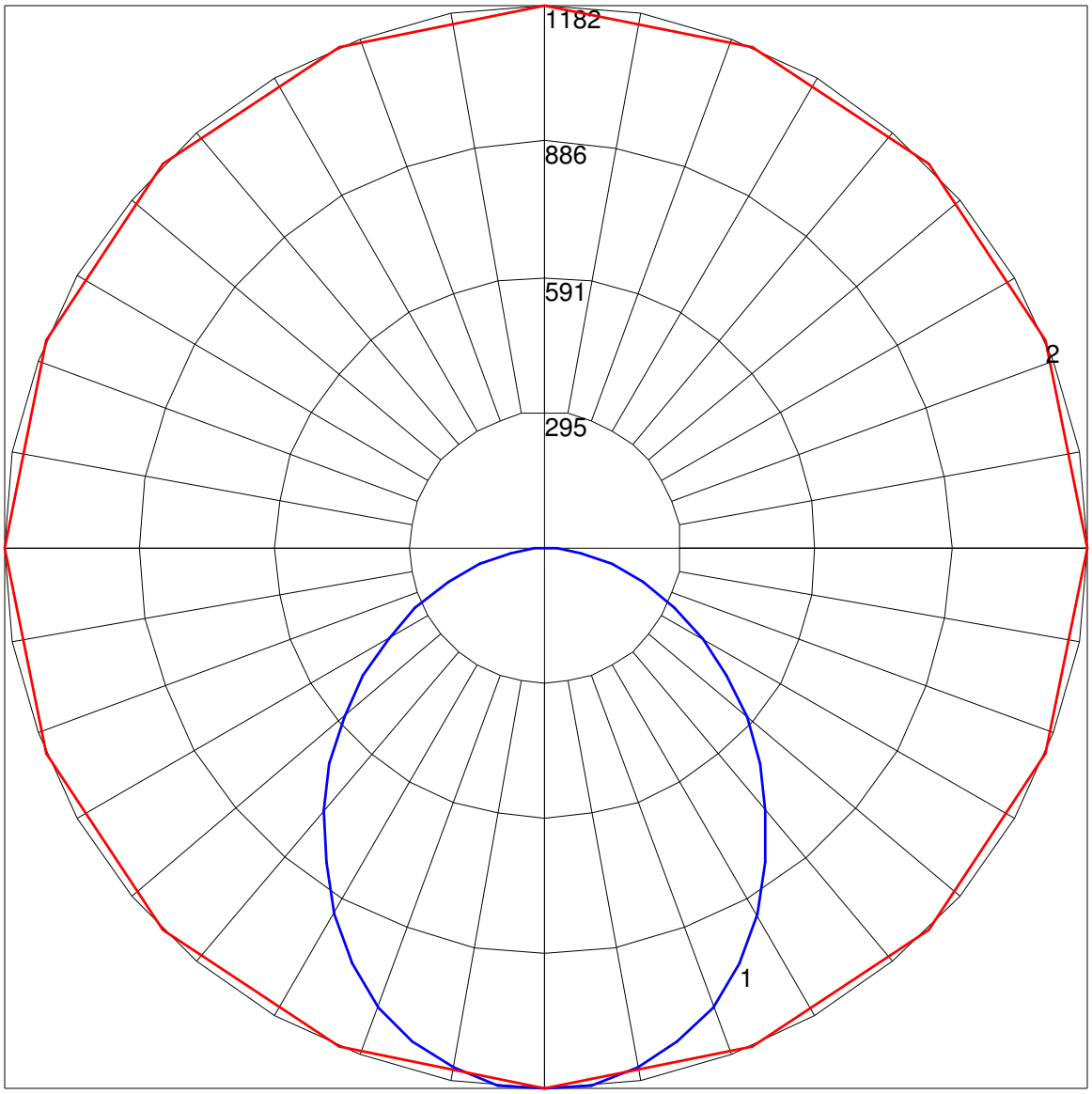
POLAR GRAPH



Maximum Candela = 1181.749 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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