H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L26-935-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-L26-935-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2530
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
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	2262	2228	2197
55	2032	2051	2108
65	1779	1940	2179
75	1387	1953	2525
85	721	1818	2450

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1002.696	1002.696	1002.696	1002.696	1002.696
5	1002.696	996.227	992.069	992.531	991.607
10	981.441	976.358	972.200	970.351	968.965
15	946.786	943.089	938.468	934.772	933.848
20	907.510	901.503	890.413	888.103	885.792
25	850.213	847.902	834.964	828.495	824.337
30	785.061	781.364	772.585	762.419	755.488
35	711.591	712.515	701.425	691.260	687.101
40	636.273	638.584	627.494	620.563	617.790
45	564.190	562.804	555.873	553.562	548.018
50	487.486	488.872	482.403	487.948	483.327
55	411.244	415.403	414.941	426.493	426.493
60	336.388	339.161	351.175	366.885	373.816
65	265.229	272.160	289.257	311.899	324.837
70	193.146	205.160	233.808	262.919	278.629
75	126.608	147.863	178.360	212.091	230.574
80	67.000	91.028	125.222	158.491	175.587
85	22.179	36.966	55.911	68.387	75.318
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	358.83	N.A.	14.20
0-30	744.01	N.A.	29.40
0-40	1182.72	N.A.	46.70
0-60	1988.27	N.A.	78.60
0-80	2467.69	N.A.	97.50
0-90	2530.03	N.A.	100.00
10-90	2435.75	N.A.	96.30
20-40	823.89	N.A.	32.60
20-50	1254.2	N.A.	49.60
40-70	1095.71	N.A.	43.30
60-80	479.43	N.A.	18.90
70-80	189.26	N.A.	7.50
80-90	62.34	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	2530.03	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	94.28
10-20	264.55
20-30	385.18
30-40	438.71
40-50	430.31
50-60	375.24
60-70	290.16
70-80	189.26
80-90	62.34
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	14.2	15.8	14.6	16.1	16.4	14.6	16.2	14.9	16.5	16.8
	3H	15.8	17.3	16.2	17.6	18.0	16.8	18.3	17.2	18.6	19.0
	4H	16.4	17.8	16.8	18.1	18.5	17.9	19.3	18.3	19.6	20.0
	6H	16.7	18.0	17.2	18.4	18.8	18.9	20.2	19.3	20.6	21.0
	8H	16.9	18.1	17.3	18.5	18.9	19.3	20.5	19.7	20.9	21.3
	12H	16.9	18.1	17.3	18.5	18.9	19.6	20.7	20.0	21.1	21.6
4H	2H	14.9	16.2	15.3	16.6	17.0	15.2	16.6	15.6	16.9	17.3
	3H	16.7	17.9	17.2	18.3	18.7	17.7	18.8	18.1	19.2	19.6
	4H	17.5	18.5	17.9	18.9	19.4	18.9	20.0	19.4	20.4	20.8
	6H	18.0	18.9	18.4	19.4	19.8	20.1	21.1	20.6	21.5	22.0
	8H	18.1	19.0	18.6	19.4	19.9	20.6	21.5	21.0	21.9	22.4
	12H	18.2	19.0	18.7	19.5	19.9	20.9	21.7	21.4	22.2	22.6
8H	4H	18.0	18.9	18.4	19.3	19.8	19.2	20.1	19.7	20.6	21.0
	6H	18.7	19.4	19.2	19.9	20.4	20.6	21.4	21.1	21.8	22.3
	8H	18.9	19.5	19.4	20.0	20.5	21.2	21.8	21.7	22.4	22.8
	12H	19.0	19.6	19.5	20.1	20.7	21.6	22.2	22.1	22.7	23.2
12H	4H	18.1	18.9	18.6	19.4	19.8	19.3	20.1	19.7	20.5	21.0
	6H	18.8	19.5	19.4	20.0	20.5	20.7	21.4	21.2	21.8	22.3
	8H	19.1	19.7	19.6	20.2	20.8	21.3	21.9	21.8	22.4	22.9

Maximum UGR = 23.2

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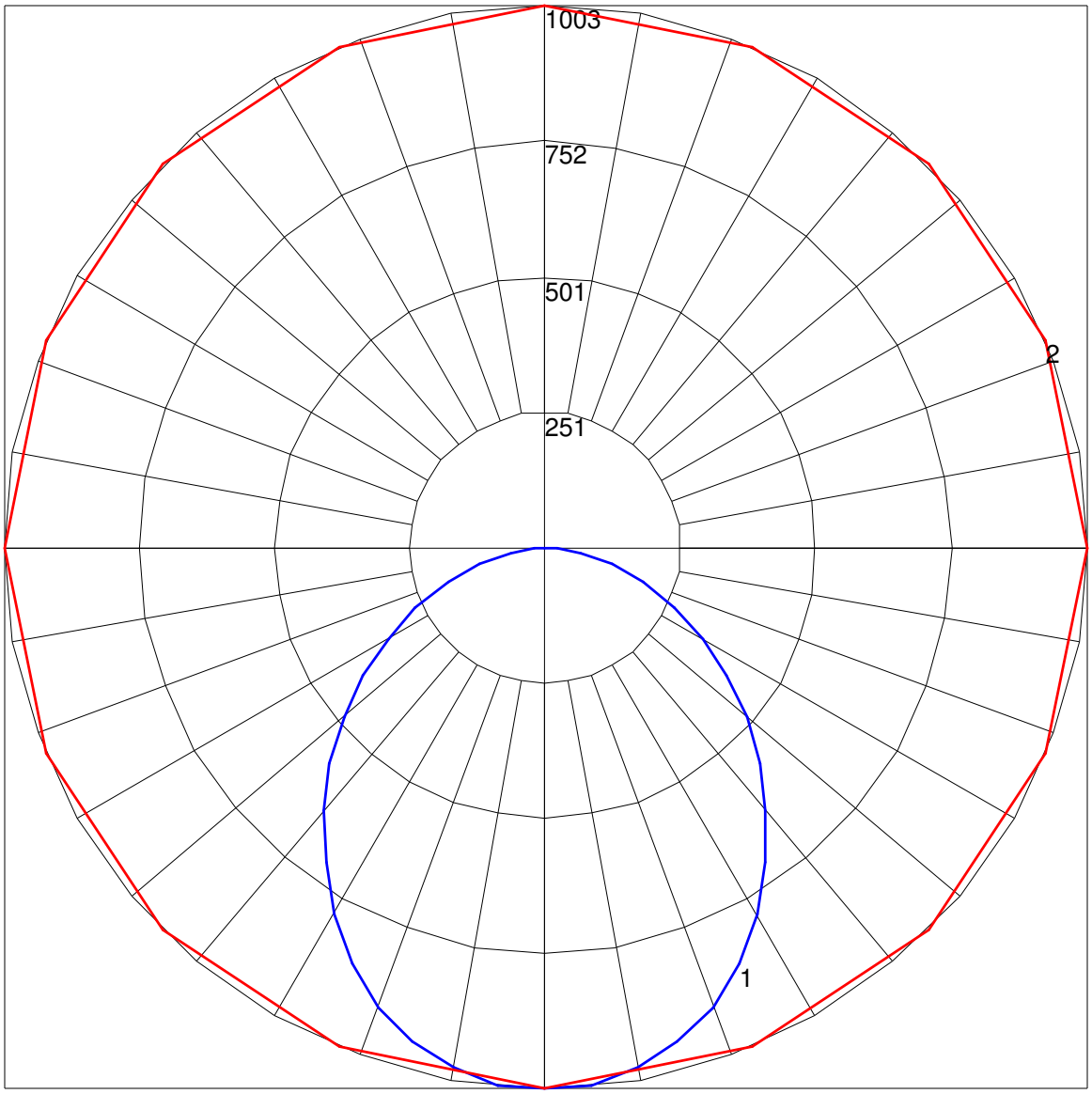
POLAR GRAPH



Maximum Candela = 1002.696 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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