H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L26-930-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-L26-930-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2500
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	116
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	2235	2202	2171
55	2008	2026	2083
65	1758	1917	2153
75	1370	1930	2495
85	713	1797	2420

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	990.760	990.760	990.760	990.760	990.760
5	990.760	984.368	980.259	980.715	979.802
10	969.757	964.735	960.626	958.800	957.430
15	935.515	931.862	927.296	923.644	922.731
20	896.706	890.771	879.813	877.530	875.247
25	840.091	837.808	825.024	818.632	814.523
30	775.715	772.062	763.387	753.343	746.494
35	703.120	704.033	693.075	683.031	678.922
40	628.699	630.982	620.024	613.175	610.436
45	557.474	556.104	549.255	546.972	541.494
50	481.683	483.052	476.660	482.139	477.574
55	406.348	410.458	410.001	421.415	421.415
60	332.384	335.123	346.994	362.518	369.366
65	262.072	268.921	285.814	308.186	320.970
70	190.847	202.718	231.025	259.789	275.313
75	125.101	146.103	176.237	209.566	227.829
80	66.203	89.945	123.731	156.604	173.497
85	21.915	36.526	55.245	67.573	74.421
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	354.56	N.A.	14.20
0-30	735.15	N.A.	29.40
0-40	1168.64	N.A.	46.70
0-60	1964.6	N.A.	78.60
0-80	2438.32	N.A.	97.50
0-90	2499.91	N.A.	100.00
10-90	2406.76	N.A.	96.30
20-40	814.08	N.A.	32.60
20-50	1239.27	N.A.	49.60
40-70	1082.67	N.A.	43.30
60-80	473.72	N.A.	18.90
70-80	187.01	N.A.	7.50
80-90	61.60	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	2499.91	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	93.16
10-20	261.40
20-30	380.60
30-40	433.48
40-50	425.19
50-60	370.78
60-70	286.71
70-80	187.01
80-90	61.60
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	16.8	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	16.3	15.3	16.6	17.0	15.2	16.6	15.6	16.9	17.3
	3H	16.8	17.9	17.2	18.3	18.7	17.7	18.9	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	21.1	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	21.9	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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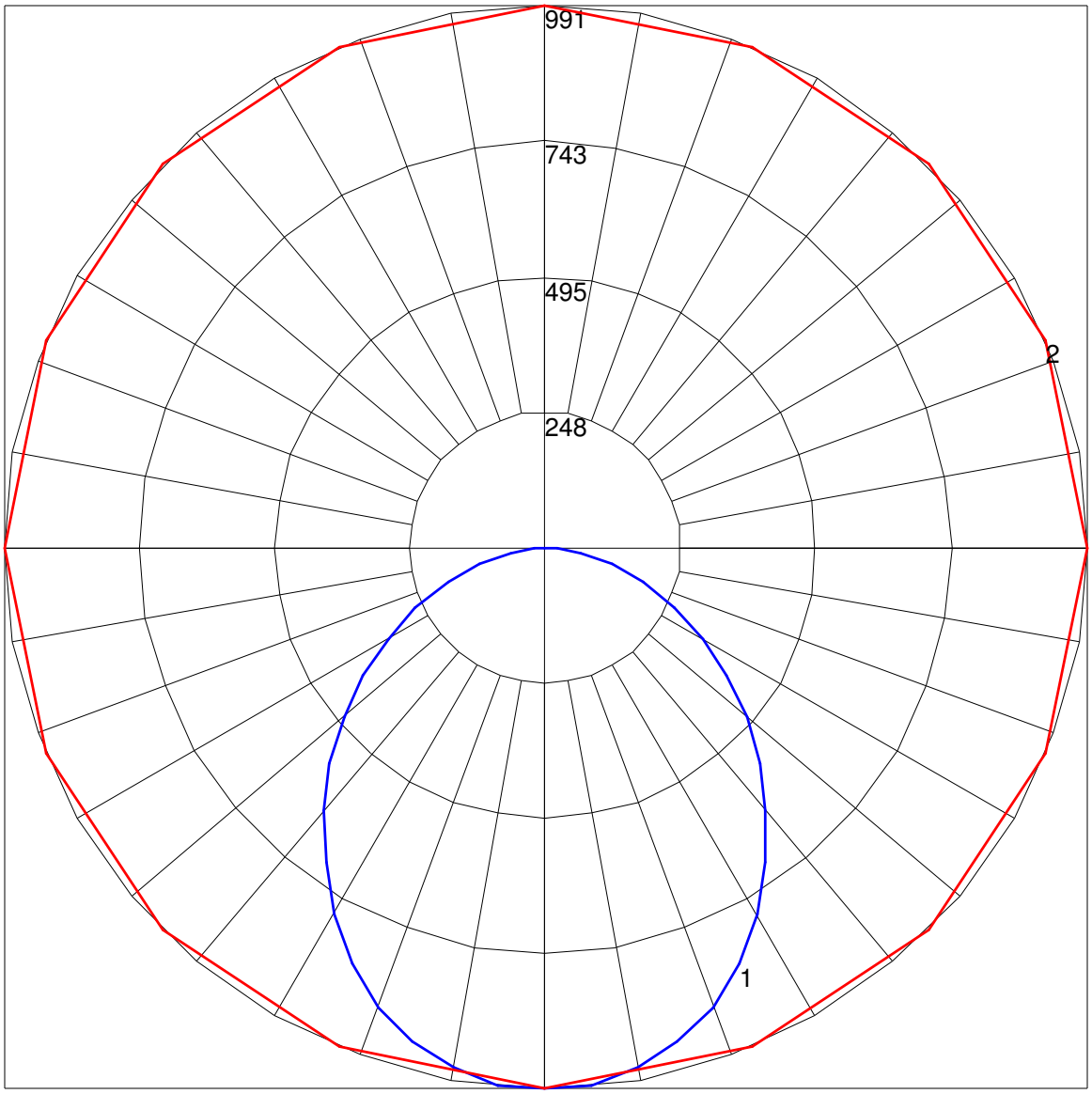
POLAR GRAPH



Maximum Candela = 990.76 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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