H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L26-927-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-L26-927-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2470
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
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	2208	2175	2145
55	1984	2002	2058
65	1737	1894	2127
75	1354	1907	2465
85	704	1775	2391

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	978.823	978.823	978.823	978.823	978.823
5	978.823	972.508	968.448	968.899	967.997
10	958.074	953.112	949.052	947.248	945.895
15	924.243	920.635	916.124	912.515	911.613
20	885.902	880.038	869.213	866.957	864.702
25	829.970	827.714	815.084	808.769	804.710
30	766.369	762.760	754.190	744.266	737.500
35	694.648	695.551	684.725	674.801	670.742
40	621.124	623.379	612.554	605.788	603.081
45	550.757	549.404	542.638	540.382	534.969
50	475.879	477.232	470.917	476.330	471.820
55	401.453	405.512	405.061	416.338	416.338
60	328.379	331.086	342.814	358.150	364.916
65	258.914	265.680	282.370	304.473	317.102
70	188.547	200.275	228.242	256.659	271.995
75	123.593	144.343	174.113	207.041	225.084
80	65.405	88.861	122.240	154.717	171.407
85	21.651	36.086	54.580	66.758	73.524
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	350.29	N.A.	14.20
0-30	726.30	N.A.	29.40
0-40	1154.56	N.A.	46.70
0-60	1940.93	N.A.	78.60
0-80	2408.94	N.A.	97.50
0-90	2469.79	N.A.	100.00
10-90	2377.76	N.A.	96.30
20-40	804.27	N.A.	32.60
20-50	1224.33	N.A.	49.60
40-70	1069.63	N.A.	43.30
60-80	468.01	N.A.	18.90
70-80	184.76	N.A.	7.50
80-90	60.85	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	2469.79	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	92.03
10-20	258.25
20-30	376.01
30-40	428.26
40-50	420.06
50-60	366.31
60-70	283.25
70-80	184.76
80-90	60.85
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	54	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	14.1	15.7	14.5	16.0	16.3	14.5	16.1	14.8	16.4	16.7
	3H	15.7	17.2	16.1	17.5	17.9	16.7	18.2	17.1	18.5	18.9
	4H	16.3	17.7	16.7	18.0	18.4	17.8	19.2	18.2	19.5	19.9
	6H	16.7	17.9	17.1	18.3	18.7	18.8	20.1	19.2	20.5	20.9
	8H	16.8	18.0	17.2	18.4	18.8	19.2	20.4	19.6	20.8	21.2
	12H	16.8	18.0	17.2	18.4	18.8	19.5	20.6	19.9	21.0	21.5
4H	2H	14.8	16.1	15.2	16.5	16.9	15.1	16.5	15.5	16.8	17.2
	3H	16.6	17.8	17.1	18.2	18.6	17.6	18.8	18.0	19.1	19.5
	4H	17.4	18.4	17.8	18.8	19.3	18.8	19.9	19.3	20.3	20.7
	6H	17.9	18.8	18.3	19.3	19.7	20.0	21.0	20.5	21.4	21.9
	8H	18.0	18.9	18.5	19.3	19.8	20.5	21.4	21.0	21.8	22.3
	12H	18.1	18.9	18.6	19.4	19.8	20.8	21.6	21.3	22.1	22.5
8H	4H	17.9	18.8	18.3	19.2	19.7	19.1	20.0	19.6	20.5	20.9
	6H	18.6	19.3	19.1	19.8	20.3	20.5	21.3	21.0	21.7	22.2
	8H	18.8	19.4	19.3	19.9	20.4	21.1	21.7	21.6	22.3	22.7
	12H	18.9	19.5	19.4	20.0	20.6	21.5	22.1	22.0	22.6	23.1
12H	4H	18.0	18.8	18.5	19.3	19.7	19.2	20.0	19.6	20.4	20.9
	6H	18.7	19.4	19.3	19.9	20.4	20.6	21.3	21.1	21.7	22.2
	8H	19.0	19.6	19.5	20.1	20.7	21.2	21.8	21.7	22.3	22.8

Maximum UGR = 23.1

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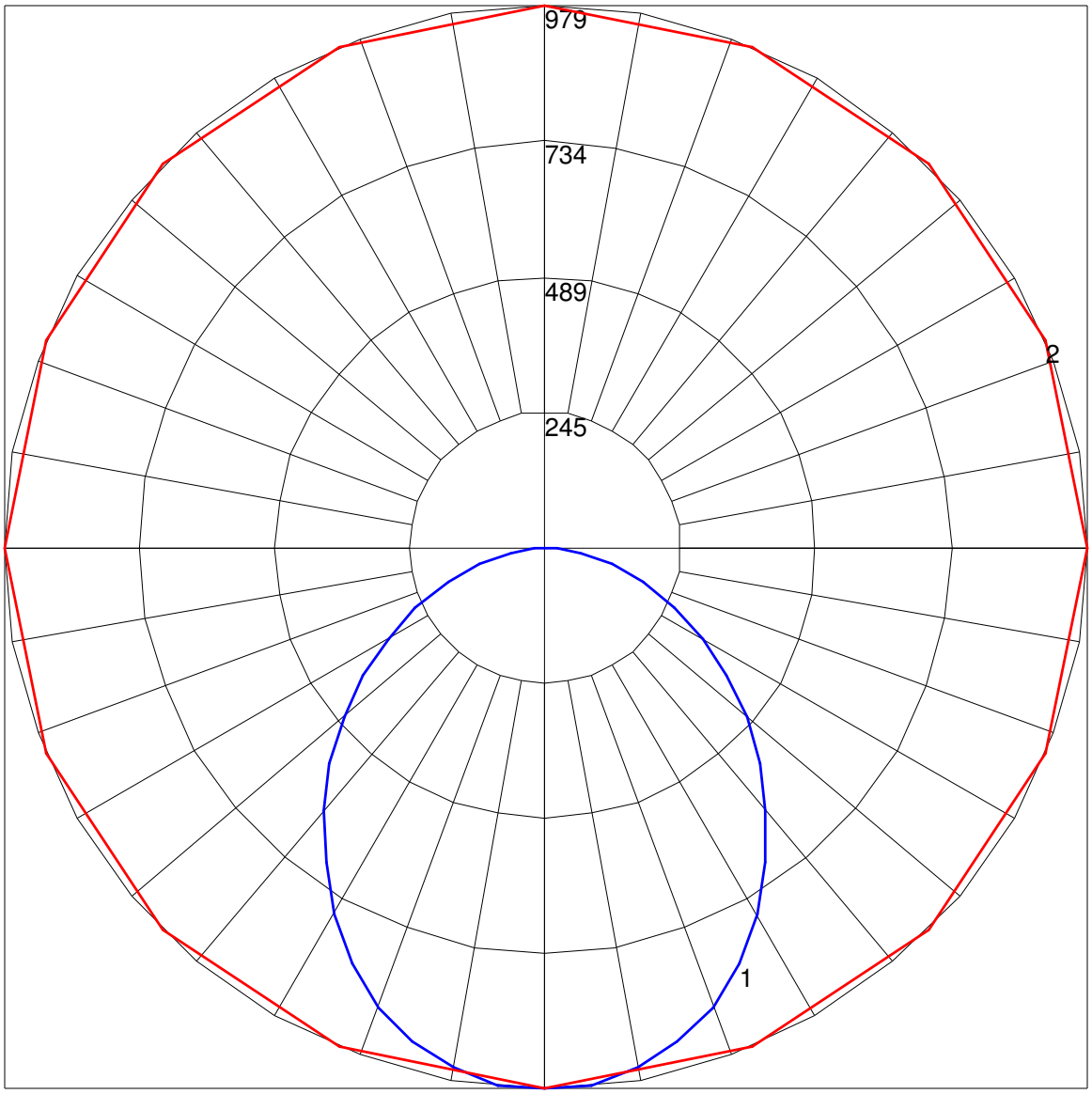
POLAR GRAPH



Maximum Candela = 978.823 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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