H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-927-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-L52-927-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4503
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	41.6
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	4025	3966	3910
55	3617	3650	3751
65	3166	3453	3878
75	2468	3477	4494
85	1284	3236	4360

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1784.577	1784.577	1784.577	1784.577	1784.577
5	1784.577	1773.064	1765.662	1766.485	1764.840
10	1746.747	1737.701	1730.300	1727.010	1724.543
15	1685.068	1678.489	1670.266	1663.686	1662.042
20	1615.166	1604.475	1584.737	1580.625	1576.514
25	1513.190	1509.078	1486.051	1474.538	1467.136
30	1397.233	1390.654	1375.029	1356.937	1344.601
35	1266.474	1268.119	1248.382	1230.289	1222.888
40	1132.425	1136.537	1116.800	1104.464	1099.530
45	1004.133	1001.666	989.330	985.218	975.350
50	867.617	870.084	858.571	868.439	860.216
55	731.923	739.325	738.502	759.062	759.062
60	598.697	603.631	625.013	652.974	665.310
65	472.049	484.385	514.814	555.110	578.137
70	343.757	365.139	416.127	467.938	495.899
75	225.334	263.163	317.441	377.475	410.371
80	119.246	162.010	222.867	282.078	312.507
85	39.475	65.791	99.509	121.713	134.049
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	638.64	N.A.	14.20
0-30	1324.18	N.A.	29.40
0-40	2104.97	N.A.	46.70
0-60	3538.68	N.A.	78.60
0-80	4391.95	N.A.	97.50
0-90	4502.9	N.A.	100.00
10-90	4335.1	N.A.	96.30
20-40	1466.34	N.A.	32.60
20-50	2232.19	N.A.	49.60
40-70	1950.13	N.A.	43.30
60-80	853.27	N.A.	18.90
70-80	336.85	N.A.	7.50
80-90	110.95	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	4502.9	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	167.79
10-20	470.84
20-30	685.54
30-40	780.80
40-50	765.85
50-60	667.85
60-70	516.43
70-80	336.85
80-90	110.95
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	16.2	17.8	16.6	18.1	18.4	16.6	18.2	16.9	18.5	18.8
	3H	17.8	19.3	18.2	19.6	20.0	18.8	20.3	19.2	20.6	21.0
	4H	18.4	19.8	18.8	20.1	20.5	19.9	21.3	20.3	21.6	22.0
	6H	18.8	20.0	19.2	20.4	20.8	20.9	22.2	21.3	22.6	23.0
	8H	18.9	20.1	19.3	20.5	20.9	21.3	22.5	21.7	22.9	23.3
	12H	18.9	20.1	19.3	20.5	20.9	21.6	22.7	22.0	23.1	23.6
4H	2H	16.9	18.2	17.3	18.6	19.0	17.2	18.6	17.6	18.9	19.3
	3H	18.7	19.9	19.2	20.3	20.7	19.7	20.9	20.1	21.2	21.6
	4H	19.5	20.5	19.9	20.9	21.4	20.9	22.0	21.4	22.4	22.8
	6H	20.0	20.9	20.4	21.4	21.8	22.1	23.1	22.6	23.5	24.0
	8H	20.1	21.0	20.6	21.4	21.9	22.6	23.5	23.1	23.9	24.4
	12H	20.2	21.0	20.7	21.5	21.9	22.9	23.7	23.4	24.2	24.6
8H	4H	20.0	20.9	20.4	21.3	21.8	21.2	22.1	21.7	22.6	23.0
	6H	20.7	21.4	21.2	21.9	22.4	22.6	23.4	23.1	23.8	24.3
	8H	20.9	21.5	21.4	22.0	22.5	23.2	23.8	23.7	24.4	24.8
	12H	21.0	21.6	21.5	22.1	22.7	23.6	24.2	24.1	24.7	25.2
12H	4H	20.1	20.9	20.6	21.4	21.8	21.3	22.1	21.7	22.5	23.0
	6H	20.8	21.5	21.4	22.0	22.5	22.7	23.4	23.2	23.8	24.3
	8H	21.1	21.7	21.6	22.2	22.8	23.3	23.9	23.8	24.4	24.9

Maximum UGR = 25.2

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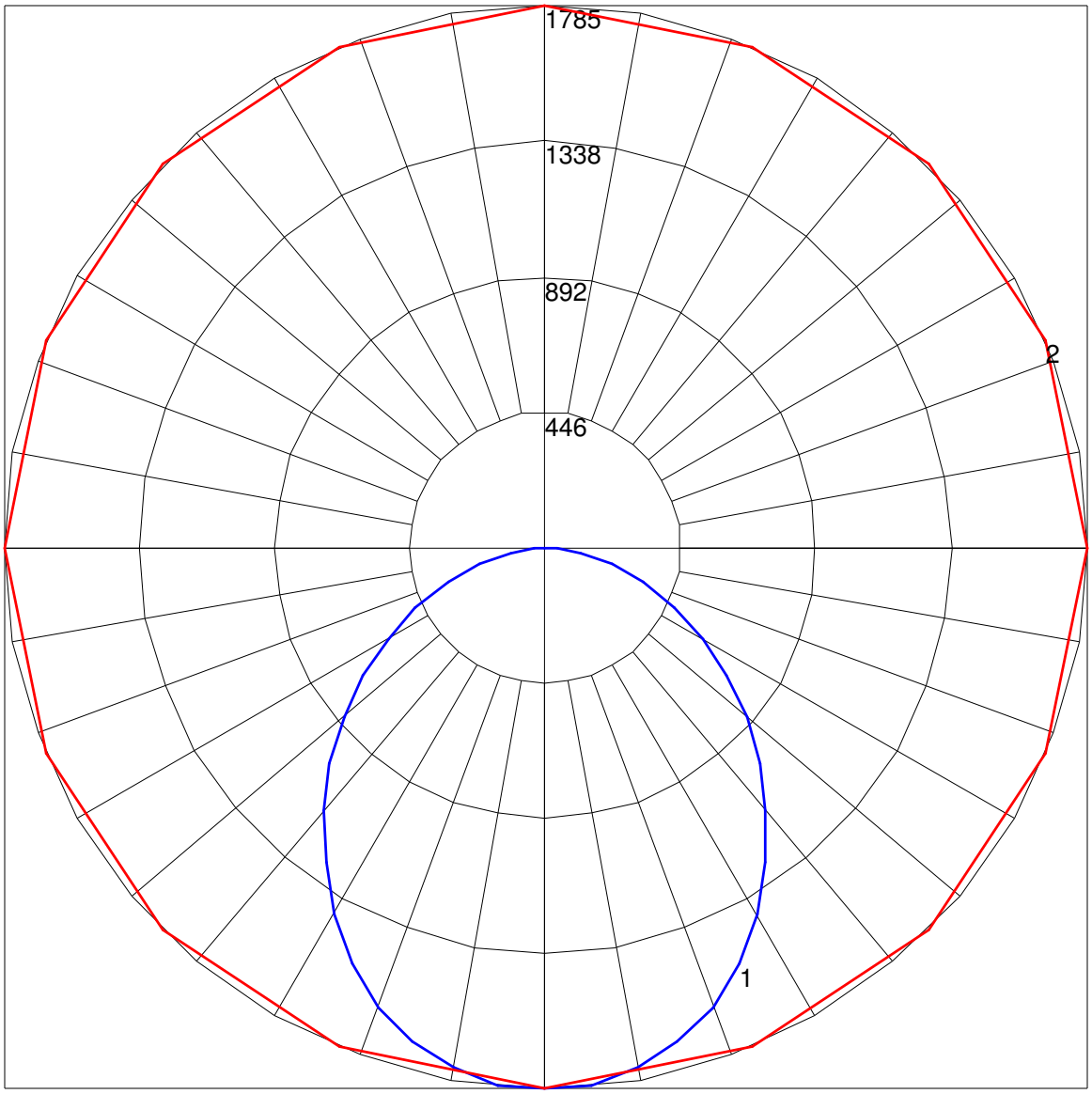
POLAR GRAPH



Maximum Candela = 1784.577 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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