H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-935-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-L52-935-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4613
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
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	4124	4063	4005
55	3705	3739	3843
65	3243	3537	3972
75	2528	3561	4604
85	1315	3315	4466

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1828.104	1828.104	1828.104	1828.104	1828.104
5	1828.104	1816.310	1808.728	1809.570	1807.885
10	1789.351	1780.084	1772.502	1769.133	1766.605
15	1726.168	1719.428	1711.004	1704.264	1702.580
20	1654.560	1643.608	1623.390	1619.178	1614.965
25	1550.097	1545.885	1522.297	1510.502	1502.920
30	1431.313	1424.573	1408.567	1390.033	1377.396
35	1297.364	1299.049	1278.830	1260.296	1252.714
40	1160.046	1164.258	1144.039	1131.402	1126.348
45	1028.624	1026.097	1013.460	1009.248	999.139
50	888.779	891.306	879.512	889.621	881.197
55	749.775	757.357	756.515	777.576	777.576
60	613.299	618.354	640.258	668.901	681.537
65	483.563	496.200	527.370	568.650	592.238
70	352.142	374.045	426.277	479.351	507.994
75	230.830	269.582	325.183	386.682	420.380
80	122.154	165.961	228.302	288.958	320.129
85	40.437	67.396	101.936	124.682	137.318
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	654.21	N.A.	14.20
0-30	1356.47	N.A.	29.40
0-40	2156.32	N.A.	46.70
0-60	3624.99	N.A.	78.60
0-80	4499.07	N.A.	97.50
0-90	4612.72	N.A.	100.00
10-90	4440.84	N.A.	96.30
20-40	1502.1	N.A.	32.60
20-50	2286.63	N.A.	49.60
40-70	1997.69	N.A.	43.30
60-80	874.08	N.A.	18.90
70-80	345.06	N.A.	7.50
80-90	113.65	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	4612.72	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	171.89
10-20	482.33
20-30	702.26
30-40	799.84
40-50	784.53
50-60	684.14
60-70	529.02
70-80	345.06
80-90	113.65
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	16.3	17.9	16.7	18.2	18.5	16.7	18.3	17.0	18.6	18.9
	3H	17.9	19.4	18.3	19.7	20.1	18.9	20.4	19.3	20.7	21.1
	4H	18.5	19.9	18.9	20.2	20.6	20.0	21.4	20.4	21.7	22.1
	6H	18.9	20.1	19.3	20.5	20.9	21.0	22.3	21.4	22.7	23.1
	8H	19.0	20.2	19.4	20.6	21.0	21.4	22.6	21.8	23.0	23.4
	12H	19.0	20.2	19.4	20.6	21.0	21.7	22.8	22.1	23.2	23.7
4H	2H	17.0	18.3	17.4	18.7	19.1	17.3	18.7	17.7	19.0	19.4
	3H	18.8	20.0	19.3	20.4	20.8	19.8	20.9	20.2	21.3	21.7
	4H	19.6	20.6	20.0	21.0	21.5	21.0	22.1	21.5	22.5	22.9
	6H	20.1	21.0	20.5	21.5	21.9	22.2	23.2	22.7	23.6	24.1
	8H	20.2	21.1	20.7	21.5	22.0	22.7	23.6	23.1	24.0	24.5
	12H	20.3	21.1	20.8	21.6	22.0	23.0	23.8	23.5	24.3	24.7
8H	4H	20.1	21.0	20.5	21.4	21.9	21.3	22.2	21.8	22.7	23.1
	6H	20.8	21.5	21.3	22.0	22.5	22.7	23.5	23.2	23.9	24.4
	8H	21.0	21.6	21.5	22.1	22.6	23.3	23.9	23.8	24.5	24.9
	12H	21.1	21.7	21.6	22.2	22.8	23.7	24.3	24.2	24.8	25.3
12H	4H	20.2	21.0	20.7	21.5	21.9	21.4	22.2	21.8	22.6	23.1
	6H	20.9	21.6	21.5	22.1	22.6	22.8	23.5	23.3	23.9	24.4
	8H	21.2	21.8	21.7	22.3	22.9	23.4	24.0	23.9	24.5	25.0

Maximum UGR = 25.3

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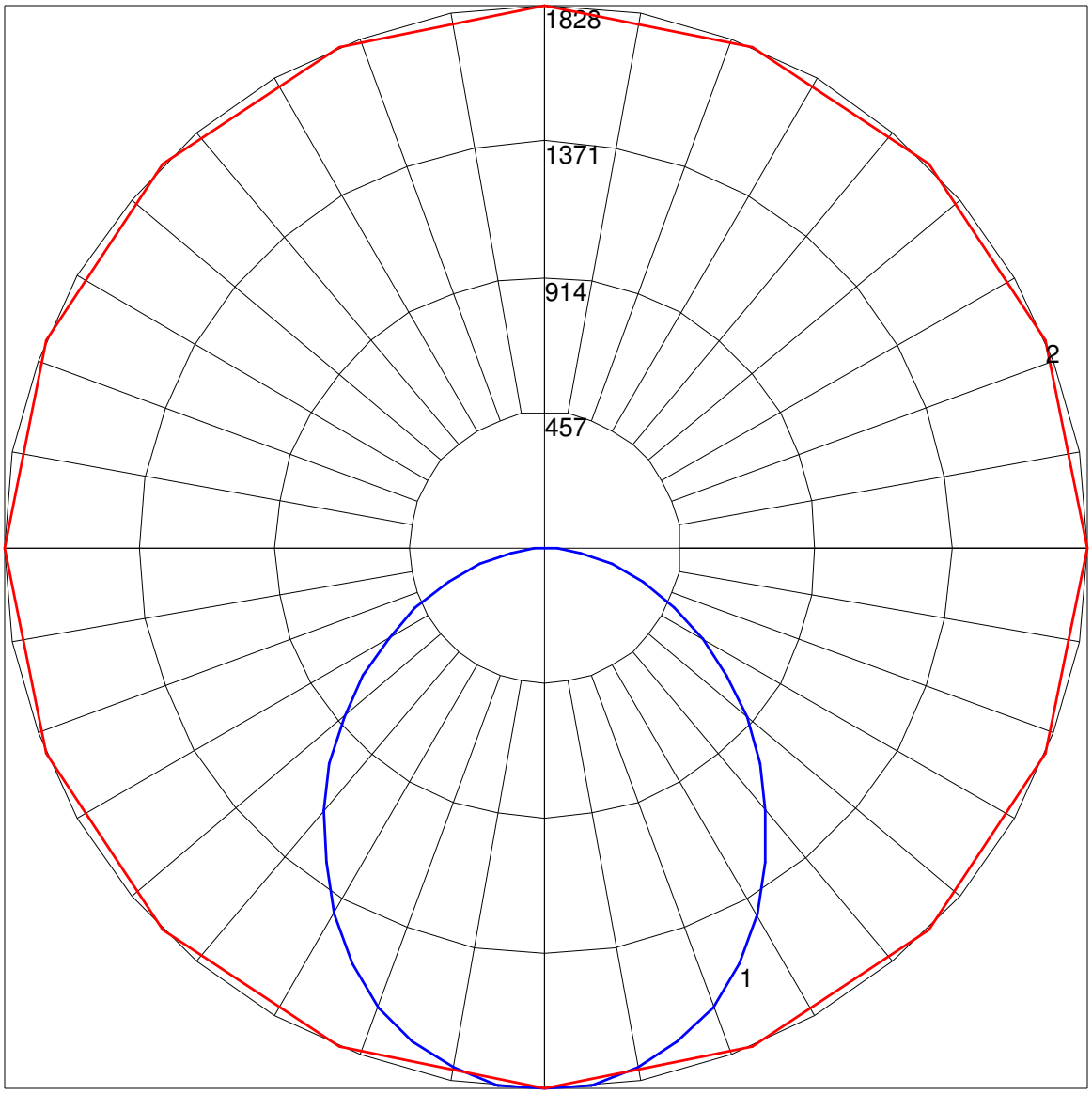
POLAR GRAPH



Maximum Candela = 1828.104 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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