H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-940-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-L43-940-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3715
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	32.2
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	3321	3272	3226
55	2985	3011	3095
65	2612	2849	3200
75	2036	2869	3708
85	1059	2670	3597

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1472.447	1472.447	1472.447	1472.447	1472.447
5	1472.447	1462.948	1456.841	1457.519	1456.162
10	1441.234	1433.770	1427.663	1424.949	1422.913
15	1390.343	1384.915	1378.129	1372.701	1371.344
20	1332.666	1323.845	1307.560	1304.167	1300.775
25	1248.527	1245.134	1226.135	1216.635	1210.528
30	1152.851	1147.423	1134.531	1119.603	1109.424
35	1044.963	1046.320	1030.034	1015.106	1009.000
40	934.359	937.752	921.467	911.289	907.217
45	828.506	826.470	816.292	812.899	804.757
50	715.867	717.903	708.403	716.546	709.760
55	603.907	610.014	609.335	626.299	626.299
60	493.982	498.054	515.696	538.766	548.945
65	389.486	399.664	424.770	458.019	477.019
70	283.633	301.275	343.345	386.093	409.164
75	185.922	217.135	261.919	311.453	338.595
80	98.389	133.674	183.886	232.742	257.848
85	32.570	54.284	82.104	100.425	110.603
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	526.94	N.A.	14.20
0-30	1092.57	N.A.	29.40
0-40	1736.81	N.A.	46.70
0-60	2919.75	N.A.	78.60
0-80	3623.78	N.A.	97.50
0-90	3715.32	N.A.	100.00
10-90	3576.88	N.A.	96.30
20-40	1209.87	N.A.	32.60
20-50	1841.77	N.A.	49.60
40-70	1609.04	N.A.	43.30
60-80	704.03	N.A.	18.90
70-80	277.93	N.A.	7.50
80-90	91.54	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	3715.32	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	138.45
10-20	388.49
20-30	565.63
30-40	644.23
40-50	631.90
50-60	551.04
60-70	426.10
70-80	277.93
80-90	91.54
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	15.6	17.2	16.0	17.5	17.8	16.0	17.6	16.3	17.9	18.2
	3H	17.2	18.7	17.6	19.0	19.4	18.2	19.7	18.6	20.0	20.4
	4H	17.8	19.2	18.2	19.5	19.9	19.3	20.7	19.7	21.0	21.4
	6H	18.1	19.4	18.6	19.8	20.2	20.3	21.6	20.7	22.0	22.4
	8H	18.3	19.5	18.7	19.9	20.3	20.7	21.9	21.1	22.3	22.7
	12H	18.3	19.5	18.7	19.9	20.3	21.0	22.1	21.4	22.5	23.0
4H	2H	16.3	17.6	16.7	18.0	18.4	16.6	18.0	17.0	18.3	18.7
	3H	18.1	19.3	18.6	19.7	20.1	19.1	20.2	19.5	20.6	21.0
	4H	18.9	19.9	19.3	20.3	20.8	20.3	21.4	20.8	21.8	22.2
	6H	19.4	20.3	19.8	20.8	21.2	21.5	22.5	22.0	22.9	23.4
	8H	19.5	20.4	20.0	20.8	21.3	22.0	22.9	22.4	23.3	23.8
	12H	19.6	20.4	20.1	20.9	21.3	22.3	23.1	22.8	23.6	24.0
8H	4H	19.4	20.3	19.8	20.7	21.2	20.6	21.5	21.1	22.0	22.4
	6H	20.1	20.8	20.6	21.3	21.8	22.0	22.8	22.5	23.2	23.7
	8H	20.3	20.9	20.8	21.4	21.9	22.6	23.2	23.1	23.8	24.2
	12H	20.4	21.0	20.9	21.5	22.1	23.0	23.6	23.5	24.1	24.6
12H	4H	19.5	20.3	20.0	20.8	21.2	20.7	21.5	21.1	21.9	22.4
	6H	20.2	20.9	20.8	21.4	21.9	22.1	22.8	22.6	23.2	23.7
	8H	20.5	21.1	21.0	21.6	22.2	22.7	23.3	23.2	23.8	24.3

Maximum UGR = 24.6

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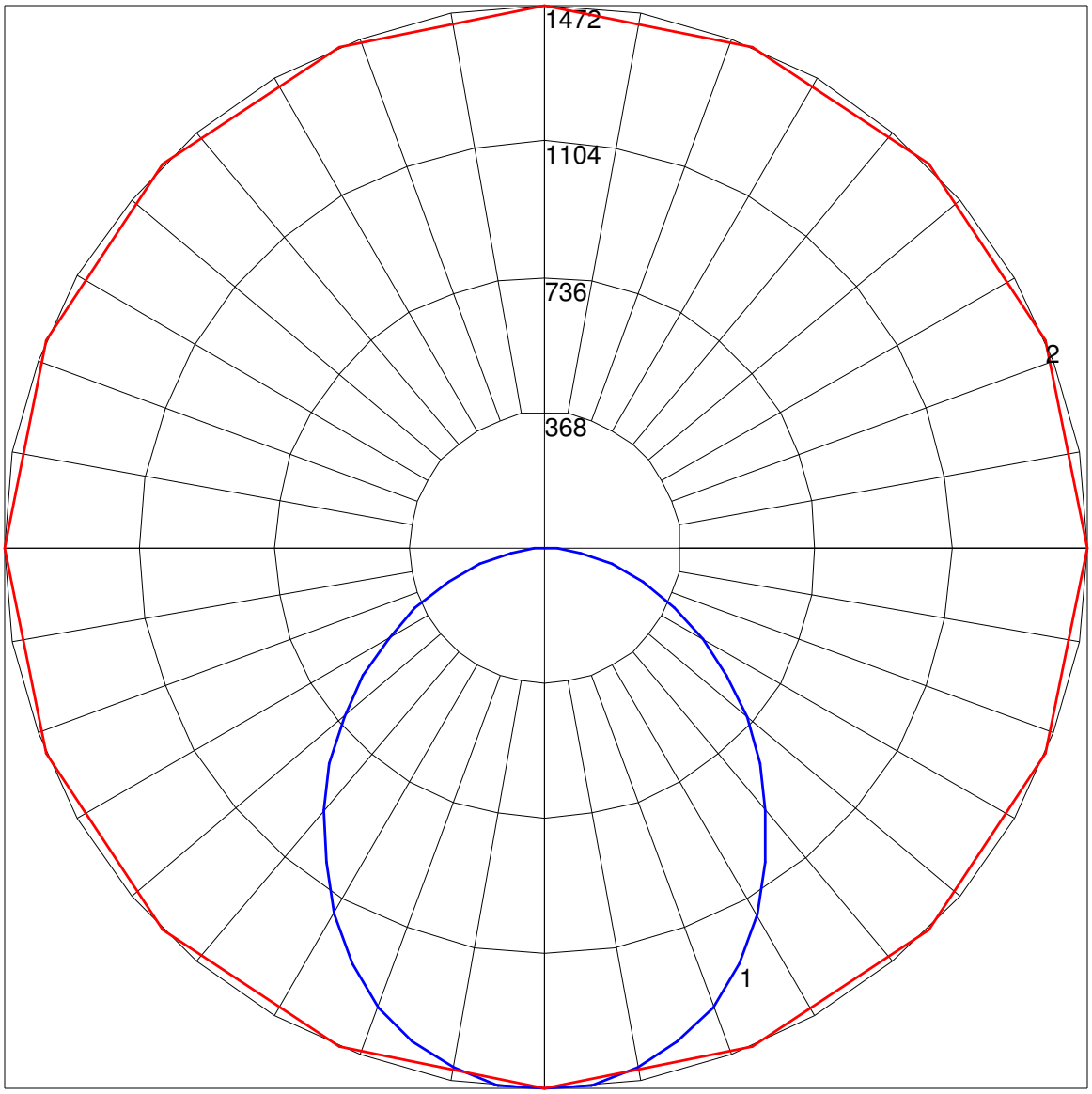
POLAR GRAPH



Maximum Candela = 1472.447 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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