H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-950-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19562.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x2'RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/CENTER FROSTED RIBBED ACRYLIC LENS
[MORE] ELECTRONIC 0-10V LED DRIVER
[LUMCAT] PT-22-L43-950-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3774
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	32.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.93 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3546	3678	3798
55	2998	3304	3525
65	2292	2867	3187
75	1593	2542	3142
85	907	2074	2592

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1442.516	1442.516	1442.516	1442.516	1442.516
5	1447.367	1438.636	1436.696	1431.845	1431.845
10	1427.965	1419.234	1418.264	1413.414	1412.443
15	1394.012	1384.311	1383.341	1381.401	1380.431
20	1345.508	1336.777	1335.807	1336.777	1336.777
25	1277.602	1268.871	1274.691	1278.572	1274.691
30	1194.174	1190.294	1196.115	1202.905	1198.055
35	1098.136	1097.166	1109.777	1114.627	1119.478
40	987.546	987.546	1008.888	1017.619	1025.380
45	861.435	861.435	893.448	913.820	922.551
50	728.534	729.504	772.187	799.350	811.961
55	590.782	601.453	650.927	680.029	694.581
60	455.940	477.282	526.756	558.769	574.290
65	332.739	360.872	416.166	451.089	462.730
70	224.090	259.013	314.307	350.201	363.782
75	141.632	175.585	226.030	261.923	279.384
80	76.637	105.739	150.363	175.585	193.047
85	27.162	47.534	62.085	62.085	77.607
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	527.04	N.A.	14.00
0-30	1113.71	N.A.	29.50
0-40	1805.48	N.A.	47.80
0-60	3067.24	N.A.	81.30
0-80	3705.36	N.A.	98.20
0-90	3774.41	N.A.	100.00
10-90	3637.88	N.A.	96.40
20-40	1278.43	N.A.	33.90
20-50	1964.39	N.A.	52.00
40-70	1666.85	N.A.	44.20
60-80	638.12	N.A.	16.90
70-80	233.04	N.A.	6.20
80-90	69.05	N.A.	1.80
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	3774.41	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	136.53
10-20	390.51
20-30	586.67
30-40	691.76
40-50	685.95
50-60	575.81
60-70	405.09
70-80	233.04
80-90	69.05
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	100	97	106	102	98	95	98	95	92	94	91	89	90	88	87	84
2	100	91	85	79	97	90	83	78	86	81	76	83	79	75	80	76	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	47	39	34	46	39	34	45	38	34	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26

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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	15.4	17.0	15.7	17.3	17.6	16.4	18.0	16.8	18.3	18.6
	3H	16.7	18.1	17.0	18.4	18.8	18.2	19.7	18.6	20.0	20.4
	4H	17.1	18.4	17.5	18.8	19.2	19.0	20.4	19.4	20.7	21.1
	6H	17.3	18.6	17.8	19.0	19.4	19.7	21.0	20.1	21.3	21.7
	8H	17.4	18.6	17.8	19.0	19.4	19.9	21.1	20.4	21.5	21.9
	12H	17.4	18.6	17.9	19.0	19.4	20.1	21.2	20.5	21.6	22.1
4H	2H	16.1	17.4	16.5	17.8	18.2	16.9	18.3	17.3	18.6	19.0
	3H	17.6	18.7	18.0	19.1	19.5	19.0	20.1	19.4	20.5	20.9
	4H	18.2	19.2	18.6	19.6	20.0	19.9	20.9	20.3	21.3	21.8
	6H	18.5	19.4	19.0	19.9	20.3	20.8	21.7	21.2	22.1	22.6
	8H	18.6	19.5	19.1	19.9	20.4	21.1	21.9	21.5	22.3	22.8
	12H	18.7	19.5	19.2	19.9	20.4	21.3	22.0	21.8	22.5	23.0
8H	4H	18.6	19.4	19.1	19.9	20.4	20.2	21.0	20.6	21.4	21.9
	6H	19.1	19.8	19.6	20.3	20.8	21.1	21.8	21.6	22.3	22.8
	8H	19.3	19.9	19.8	20.5	20.9	21.5	22.2	22.1	22.7	23.2
	12H	19.4	20.0	19.9	20.5	21.0	21.8	22.4	22.3	22.8	23.4
12H	4H	18.7	19.4	19.2	19.9	20.4	20.2	20.9	20.6	21.4	21.9
	6H	19.3	19.9	19.8	20.4	20.9	21.2	21.8	21.7	22.3	22.8
	8H	19.5	20.1	20.0	20.6	21.1	21.6	22.2	22.1	22.7	23.2

Maximum UGR = 23.4

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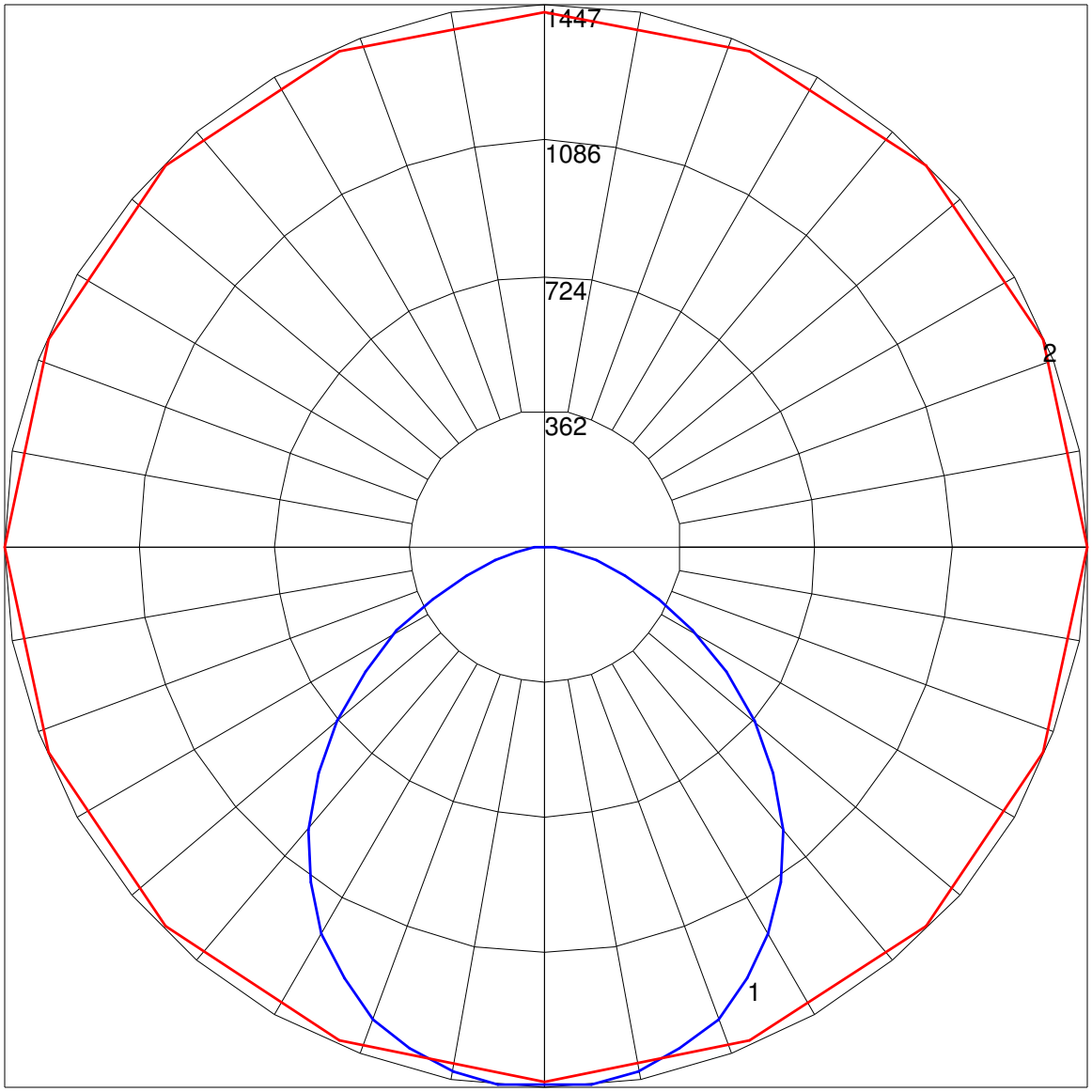
POLAR GRAPH



Maximum Candela = 1447.367 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)