H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-830-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-L52-830-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5277
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	127
Total Luminaire Watts	41.6
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	4959	5143	5311
55	4192	4619	4929
65	3205	4008	4457
75	2227	3555	4394
85	1269	2900	3624

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2016.943	2016.943	2016.943	2016.943	2016.943
5	2023.725	2011.518	2008.805	2002.023	2002.023
10	1996.597	1984.390	1983.033	1976.252	1974.895
15	1949.124	1935.560	1934.204	1931.491	1930.134
20	1881.305	1869.097	1867.741	1869.097	1869.097
25	1786.358	1774.150	1782.289	1787.714	1782.289
30	1669.709	1664.283	1672.422	1681.916	1675.134
35	1535.427	1534.070	1551.703	1558.485	1565.267
40	1380.799	1380.799	1410.639	1422.847	1433.698
45	1204.469	1204.469	1249.230	1277.714	1289.921
50	1018.644	1020.001	1079.682	1117.660	1135.293
55	826.038	840.958	910.134	950.825	971.171
60	637.500	667.341	736.517	781.277	802.979
65	465.240	504.575	581.889	630.719	646.995
70	313.325	362.155	439.468	489.655	508.644
75	198.032	245.506	316.037	366.224	390.639
80	107.154	147.846	210.240	245.506	269.920
85	37.979	66.463	86.809	86.809	108.511
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	736.92	N.A.	14.00
0-30	1557.21	N.A.	29.50
0-40	2524.44	N.A.	47.80
0-60	4288.65	N.A.	81.30
0-80	5180.88	N.A.	98.20
0-90	5277.42	N.A.	100.00
10-90	5086.52	N.A.	96.40
20-40	1787.52	N.A.	33.90
20-50	2746.63	N.A.	52.00
40-70	2330.61	N.A.	44.20
60-80	892.23	N.A.	16.90
70-80	325.83	N.A.	6.20
80-90	96.54	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	5277.42	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	190.90
10-20	546.02
20-30	820.29
30-40	967.23
40-50	959.11
50-60	805.10
60-70	566.40
70-80	325.83
80-90	96.54
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	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	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	16.6	18.2	16.9	18.5	18.8	17.6	19.2	18.0	19.5	19.8
	3H	17.9	19.3	18.2	19.6	20.0	19.4	20.9	19.8	21.2	21.6
	4H	18.3	19.6	18.7	20.0	20.4	20.2	21.6	20.6	21.9	22.3
	6H	18.5	19.8	19.0	20.2	20.6	20.9	22.2	21.3	22.5	22.9
	8H	18.6	19.8	19.0	20.2	20.6	21.1	22.3	21.6	22.7	23.1
	12H	18.6	19.8	19.1	20.2	20.6	21.3	22.4	21.7	22.8	23.3
4H	2H	17.3	18.6	17.7	19.0	19.4	18.1	19.5	18.5	19.8	20.2
	3H	18.8	19.9	19.2	20.3	20.7	20.2	21.3	20.6	21.7	22.1
	4H	19.4	20.4	19.8	20.8	21.2	21.1	22.1	21.5	22.5	23.0
	6H	19.7	20.6	20.2	21.1	21.5	22.0	22.9	22.4	23.3	23.8
	8H	19.8	20.7	20.3	21.1	21.6	22.3	23.1	22.7	23.5	24.0
	12H	19.9	20.7	20.4	21.1	21.6	22.5	23.2	22.9	23.7	24.2
8H	4H	19.8	20.6	20.3	21.1	21.5	21.4	22.2	21.8	22.6	23.1
	6H	20.3	21.0	20.8	21.5	22.0	22.3	23.0	22.8	23.5	24.0
	8H	20.5	21.1	21.0	21.7	22.1	22.7	23.4	23.3	23.9	24.4
	12H	20.6	21.2	21.1	21.7	22.2	23.0	23.6	23.5	24.0	24.6
12H	4H	19.9	20.6	20.4	21.1	21.6	21.4	22.1	21.8	22.6	23.1
	6H	20.5	21.1	21.0	21.6	22.1	22.4	23.0	22.9	23.5	24.0
	8H	20.7	21.3	21.2	21.8	22.3	22.8	23.4	23.3	23.9	24.4

Maximum UGR = 24.6

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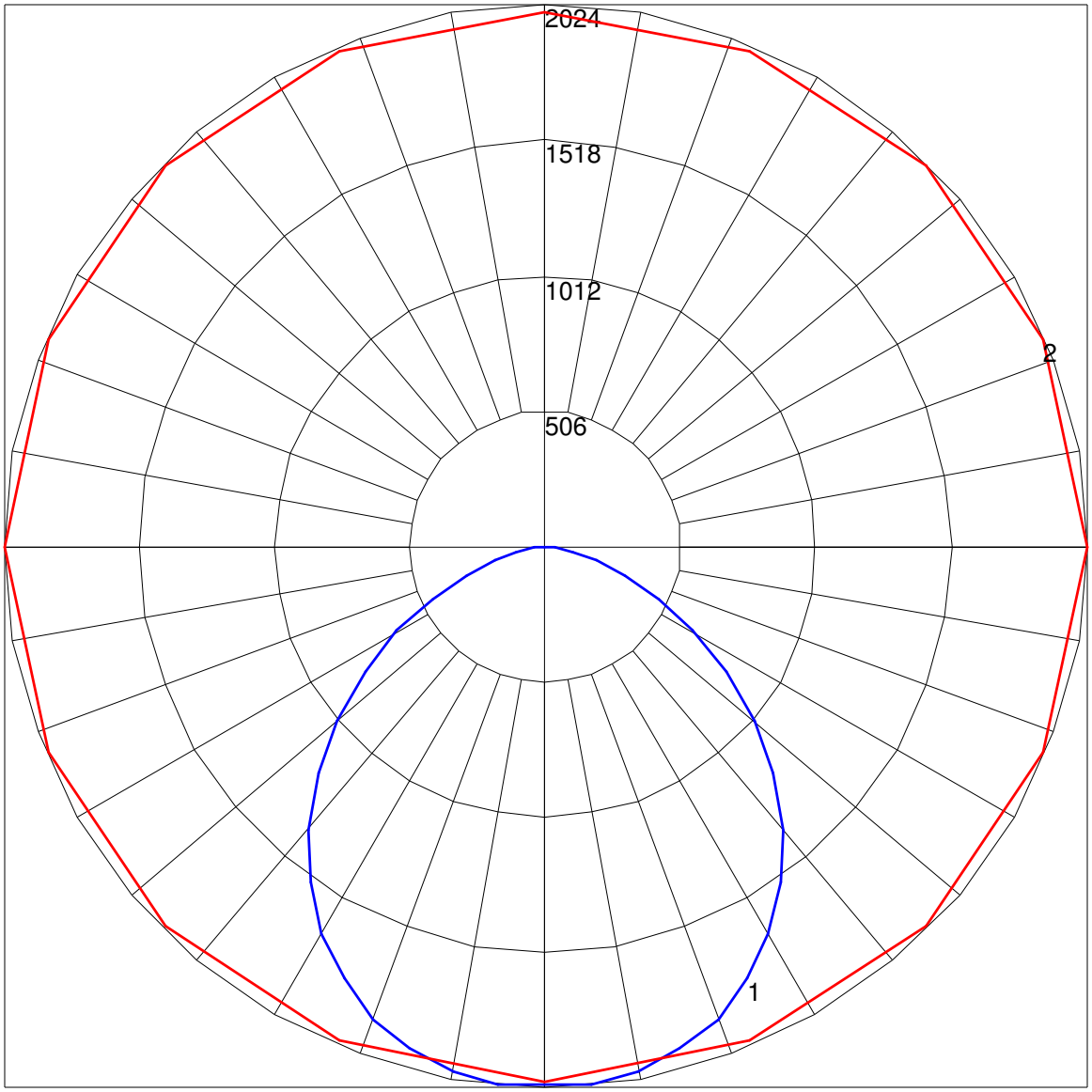
POLAR GRAPH



Maximum Candela = 2023.725 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.)

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