H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-940-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-L61-940-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5223
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	50.2
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	4907	5089	5255
55	4149	4571	4878
65	3171	3967	4410
75	2204	3518	4348
85	1255	2869	3587

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1995.959	1995.959	1995.959	1995.959	1995.959
5	2002.670	1990.589	1987.905	1981.194	1981.194
10	1975.824	1963.744	1962.402	1955.690	1954.348
15	1928.845	1915.422	1914.080	1911.395	1910.053
20	1861.731	1849.651	1848.309	1849.651	1849.651
25	1767.772	1755.692	1763.745	1769.115	1763.745
30	1652.337	1646.968	1655.021	1664.417	1657.706
35	1519.452	1518.110	1535.559	1542.271	1548.982
40	1366.433	1366.433	1395.963	1408.043	1418.782
45	1191.938	1191.938	1236.233	1264.420	1276.501
50	1008.046	1009.389	1068.449	1106.032	1123.482
55	817.444	832.209	900.665	940.933	961.067
60	630.868	660.398	728.854	773.149	794.625
65	460.399	499.325	575.835	624.157	640.264
70	310.065	358.387	434.896	484.560	503.352
75	195.972	242.951	312.749	362.413	386.574
80	106.039	146.308	208.052	242.951	267.112
85	37.584	65.771	85.905	85.905	107.382
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	729.25	N.A.	14.00
0-30	1541.00	N.A.	29.50
0-40	2498.17	N.A.	47.80
0-60	4244.03	N.A.	81.30
0-80	5126.98	N.A.	98.20
0-90	5222.52	N.A.	100.00
10-90	5033.6	N.A.	96.40
20-40	1768.92	N.A.	33.90
20-50	2718.05	N.A.	52.00
40-70	2306.36	N.A.	44.20
60-80	882.95	N.A.	16.90
70-80	322.44	N.A.	6.20
80-90	95.54	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	5222.52	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	188.92
10-20	540.33
20-30	811.75
30-40	957.17
40-50	949.13
50-60	796.73
60-70	560.50
70-80	322.44
80-90	95.54
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	99	91	85	79	97	90	83	78	86	81	76	83	78	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	33	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	16.5	18.1	16.8	18.4	18.7	17.5	19.1	17.9	19.4	19.7
	3H	17.8	19.2	18.1	19.5	19.9	19.3	20.8	19.7	21.1	21.5
	4H	18.2	19.5	18.6	19.9	20.3	20.1	21.5	20.5	21.8	22.2
	6H	18.4	19.7	18.9	20.1	20.5	20.8	22.1	21.2	22.4	22.8
	8H	18.5	19.7	18.9	20.1	20.5	21.0	22.2	21.5	22.6	23.0
	12H	18.5	19.7	19.0	20.1	20.5	21.2	22.3	21.6	22.7	23.2
4H	2H	17.2	18.5	17.6	18.9	19.3	18.0	19.4	18.4	19.7	20.1
	3H	18.7	19.8	19.1	20.2	20.6	20.1	21.2	20.5	21.6	22.0
	4H	19.3	20.3	19.7	20.7	21.1	21.0	22.0	21.4	22.4	22.9
	6H	19.6	20.5	20.1	21.0	21.4	21.9	22.8	22.3	23.2	23.7
	8H	19.7	20.6	20.2	21.0	21.5	22.2	23.0	22.6	23.4	23.9
	12H	19.8	20.6	20.3	21.0	21.5	22.4	23.1	22.8	23.6	24.1
8H	4H	19.7	20.5	20.2	21.0	21.4	21.3	22.1	21.7	22.5	23.0
	6H	20.2	20.9	20.7	21.4	21.9	22.2	22.9	22.7	23.4	23.9
	8H	20.4	21.0	20.9	21.6	22.0	22.6	23.3	23.2	23.8	24.3
	12H	20.5	21.1	21.0	21.6	22.1	22.9	23.5	23.4	23.9	24.5
12H	4H	19.8	20.5	20.3	21.0	21.5	21.3	22.0	21.7	22.5	23.0
	6H	20.4	21.0	20.9	21.5	22.0	22.3	22.9	22.8	23.4	23.9
	8H	20.6	21.2	21.1	21.7	22.2	22.7	23.3	23.2	23.8	24.3

Maximum UGR = 24.5

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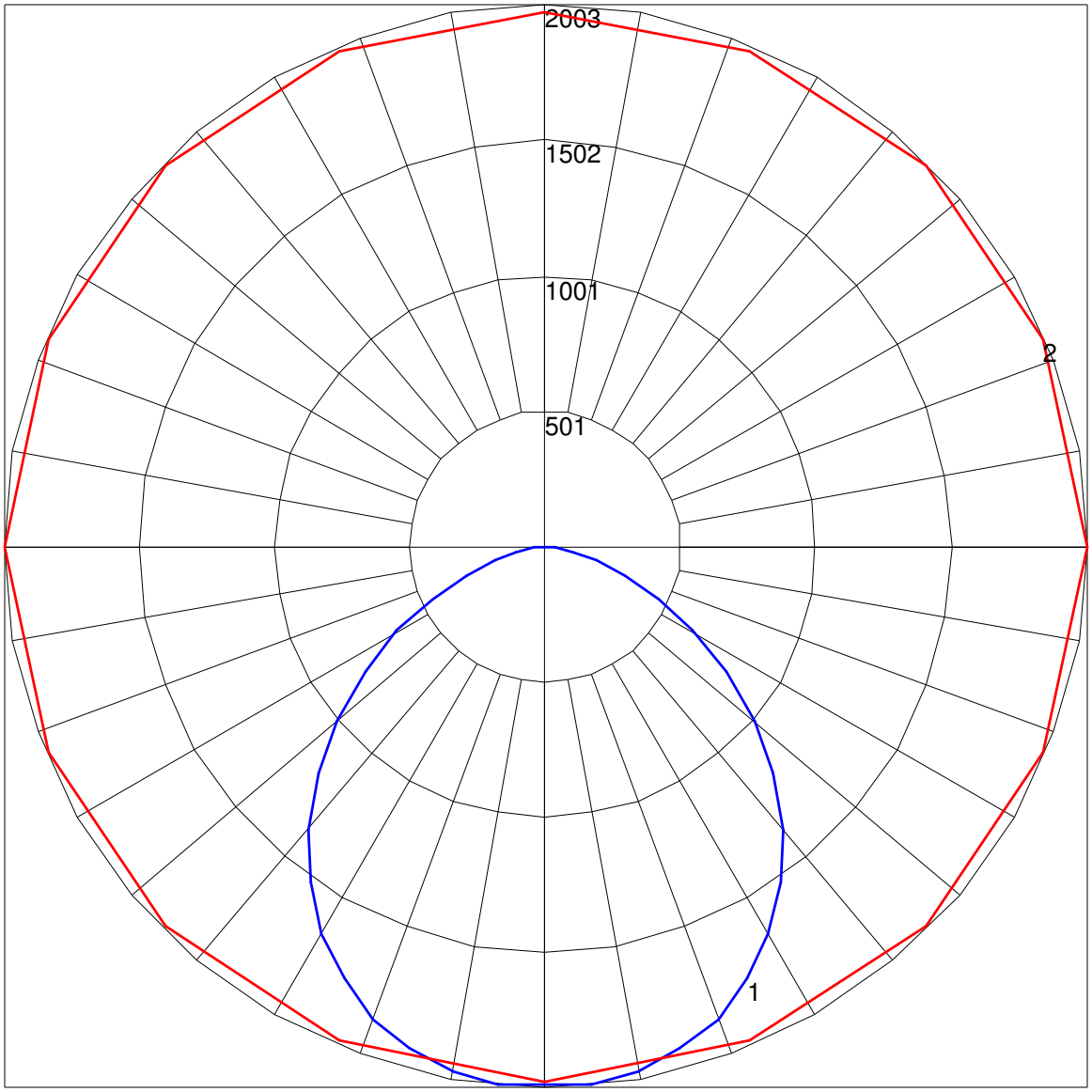
POLAR GRAPH



Maximum Candela = 2002.67 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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