H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L26-935-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-L26-935-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2456
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	21.5
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	2308	2393	2471
55	1951	2150	2294
65	1491	1865	2074
75	1037	1654	2045
85	590	1349	1687

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	938.656	938.656	938.656	938.656	938.656
5	941.812	936.131	934.868	931.712	931.712
10	929.187	923.506	922.875	919.719	919.087
15	907.094	900.781	900.150	898.888	898.256
20	875.532	869.851	869.219	869.851	869.851
25	831.345	825.664	829.451	831.976	829.451
30	777.058	774.533	778.321	782.739	779.583
35	714.565	713.934	722.140	725.296	728.452
40	642.604	642.604	656.491	662.172	667.222
45	560.542	560.542	581.373	594.629	600.310
50	474.062	474.693	502.468	520.143	528.349
55	384.426	391.370	423.563	442.500	451.969
60	296.683	310.571	342.764	363.595	373.695
65	216.516	234.822	270.803	293.527	301.102
70	145.817	168.541	204.522	227.878	236.715
75	92.161	114.255	147.079	170.435	181.798
80	49.868	68.805	97.842	114.255	125.617
85	17.675	30.931	40.399	40.399	50.499
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	342.95	N.A.	14.00
0-30	724.70	N.A.	29.50
0-40	1174.84	N.A.	47.80
0-60	1995.88	N.A.	81.30
0-80	2411.11	N.A.	98.20
0-90	2456.04	N.A.	100.00
10-90	2367.19	N.A.	96.40
20-40	831.89	N.A.	33.90
20-50	1278.24	N.A.	52.00
40-70	1084.63	N.A.	44.20
60-80	415.23	N.A.	16.90
70-80	151.64	N.A.	6.20
80-90	44.93	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	2456.04	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	88.84
10-20	254.11
20-30	381.75
30-40	450.14
40-50	446.35
50-60	374.68
60-70	263.59
70-80	151.64
80-90	44.93
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	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	13.9	15.5	14.2	15.8	16.1	14.9	16.5	15.3	16.8	17.1
	3H	15.2	16.6	15.5	16.9	17.3	16.7	18.2	17.1	18.5	18.9
	4H	15.6	16.9	16.0	17.3	17.7	17.5	18.9	17.9	19.2	19.6
	6H	15.8	17.1	16.3	17.5	17.9	18.2	19.5	18.6	19.8	20.2
	8H	15.9	17.1	16.3	17.5	17.9	18.4	19.6	18.9	20.0	20.4
	12H	15.9	17.1	16.4	17.5	17.9	18.6	19.7	19.0	20.1	20.6
4H	2H	14.6	15.9	15.0	16.3	16.7	15.4	16.8	15.8	17.1	17.5
	3H	16.1	17.2	16.5	17.6	18.0	17.5	18.6	17.9	19.0	19.4
	4H	16.7	17.7	17.1	18.1	18.5	18.4	19.4	18.8	19.8	20.3
	6H	17.0	17.9	17.5	18.4	18.8	19.3	20.2	19.7	20.6	21.1
	8H	17.1	18.0	17.6	18.4	18.9	19.6	20.4	20.0	20.8	21.3
	12H	17.2	18.0	17.7	18.4	18.9	19.8	20.5	20.2	21.0	21.5
8H	4H	17.1	17.9	17.6	18.4	18.8	18.7	19.5	19.1	19.9	20.4
	6H	17.6	18.3	18.1	18.8	19.3	19.6	20.3	20.1	20.8	21.3
	8H	17.8	18.4	18.3	19.0	19.4	20.0	20.7	20.6	21.2	21.7
	12H	17.9	18.5	18.4	19.0	19.5	20.3	20.9	20.8	21.3	21.9
12H	4H	17.2	17.9	17.7	18.4	18.9	18.7	19.4	19.1	19.9	20.4
	6H	17.8	18.4	18.3	18.9	19.4	19.7	20.3	20.2	20.8	21.3
	8H	18.0	18.6	18.5	19.1	19.6	20.1	20.7	20.6	21.2	21.7

Maximum UGR = 21.9

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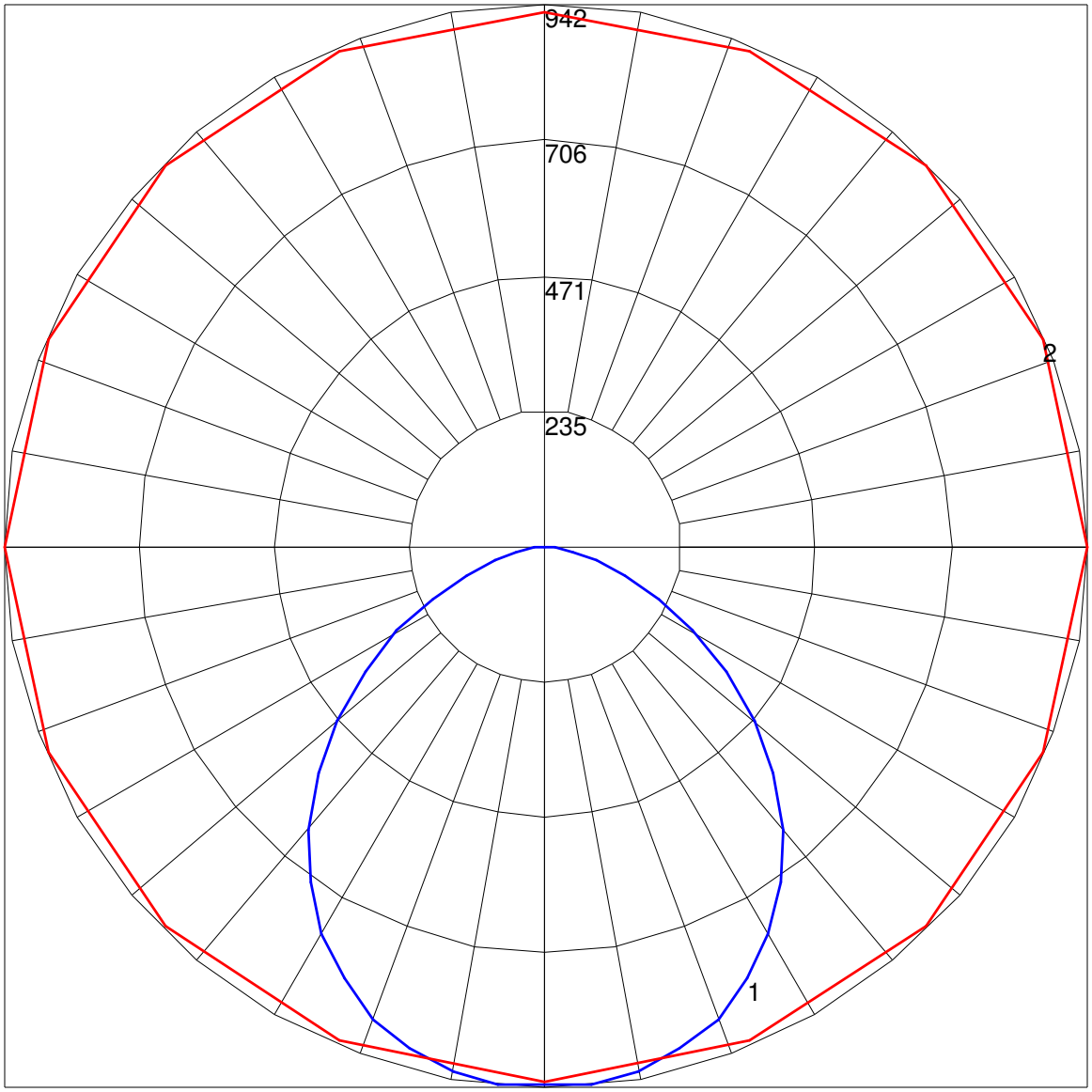
POLAR GRAPH



Maximum Candela = 941.812 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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