H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-930-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-L43-930-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3481
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
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	3271	3392	3503
55	2765	3047	3251
65	2114	2644	2940
75	1469	2345	2898
85	837	1912	2391

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1330.321	1330.321	1330.321	1330.321	1330.321
5	1334.794	1326.742	1324.953	1320.480	1320.480
10	1316.901	1308.849	1307.955	1303.481	1302.587
15	1285.589	1276.642	1275.748	1273.959	1273.064
20	1240.857	1232.805	1231.911	1232.805	1232.805
25	1178.233	1170.181	1175.549	1179.127	1175.549
30	1101.294	1097.716	1103.084	1109.346	1104.873
35	1012.725	1011.831	1023.461	1027.934	1032.407
40	910.737	910.737	930.419	938.471	945.628
45	794.435	794.435	823.958	842.745	850.797
50	671.870	672.765	712.129	737.178	748.809
55	544.832	554.673	600.299	627.138	640.558
60	420.478	440.160	485.786	515.309	529.623
65	306.859	332.804	383.798	416.005	426.740
70	206.660	238.867	289.861	322.963	335.488
75	130.617	161.929	208.450	241.551	257.655
80	70.676	97.515	138.668	161.929	178.032
85	25.050	43.837	57.257	57.257	71.571
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	486.05	N.A.	14.00
0-30	1027.09	N.A.	29.50
0-40	1665.05	N.A.	47.80
0-60	2828.68	N.A.	81.30
0-80	3417.17	N.A.	98.20
0-90	3480.84	N.A.	100.00
10-90	3354.93	N.A.	96.40
20-40	1179.00	N.A.	33.90
20-50	1811.6	N.A.	52.00
40-70	1537.21	N.A.	44.20
60-80	588.49	N.A.	16.90
70-80	214.91	N.A.	6.20
80-90	63.68	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	3480.84	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	125.91
10-20	360.14
20-30	541.04
30-40	637.96
40-50	632.60
50-60	531.03
60-70	373.58
70-80	214.91
80-90	63.68
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	15.1	16.7	15.4	17.0	17.3	16.1	17.7	16.5	18.0	18.3
	3H	16.4	17.8	16.7	18.1	18.5	17.9	19.4	18.3	19.7	20.1
	4H	16.8	18.1	17.2	18.5	18.9	18.7	20.1	19.1	20.4	20.8
	6H	17.0	18.3	17.5	18.7	19.1	19.4	20.7	19.8	21.0	21.4
	8H	17.1	18.3	17.5	18.7	19.1	19.6	20.8	20.1	21.2	21.6
	12H	17.1	18.3	17.6	18.7	19.1	19.8	20.9	20.2	21.3	21.8
4H	2H	15.8	17.1	16.2	17.5	17.9	16.6	18.0	17.0	18.3	18.7
	3H	17.3	18.4	17.7	18.8	19.2	18.7	19.8	19.1	20.2	20.6
	4H	17.9	18.9	18.3	19.3	19.7	19.6	20.6	20.0	21.0	21.5
	6H	18.2	19.1	18.7	19.6	20.0	20.5	21.4	20.9	21.8	22.3
	8H	18.3	19.2	18.8	19.6	20.1	20.8	21.6	21.2	22.0	22.5
	12H	18.4	19.2	18.9	19.6	20.1	21.0	21.7	21.4	22.2	22.7
8H	4H	18.3	19.1	18.8	19.6	20.0	19.9	20.7	20.3	21.1	21.6
	6H	18.8	19.5	19.3	20.0	20.5	20.8	21.5	21.3	22.0	22.5
	8H	19.0	19.6	19.5	20.2	20.6	21.2	21.9	21.8	22.4	22.9
	12H	19.1	19.7	19.6	20.2	20.7	21.5	22.1	22.0	22.5	23.1
12H	4H	18.4	19.1	18.9	19.6	20.1	19.9	20.6	20.3	21.1	21.6
	6H	19.0	19.6	19.5	20.1	20.6	20.9	21.5	21.4	22.0	22.5
	8H	19.2	19.8	19.7	20.3	20.8	21.3	21.9	21.8	22.4	22.9

Maximum UGR = 23.1

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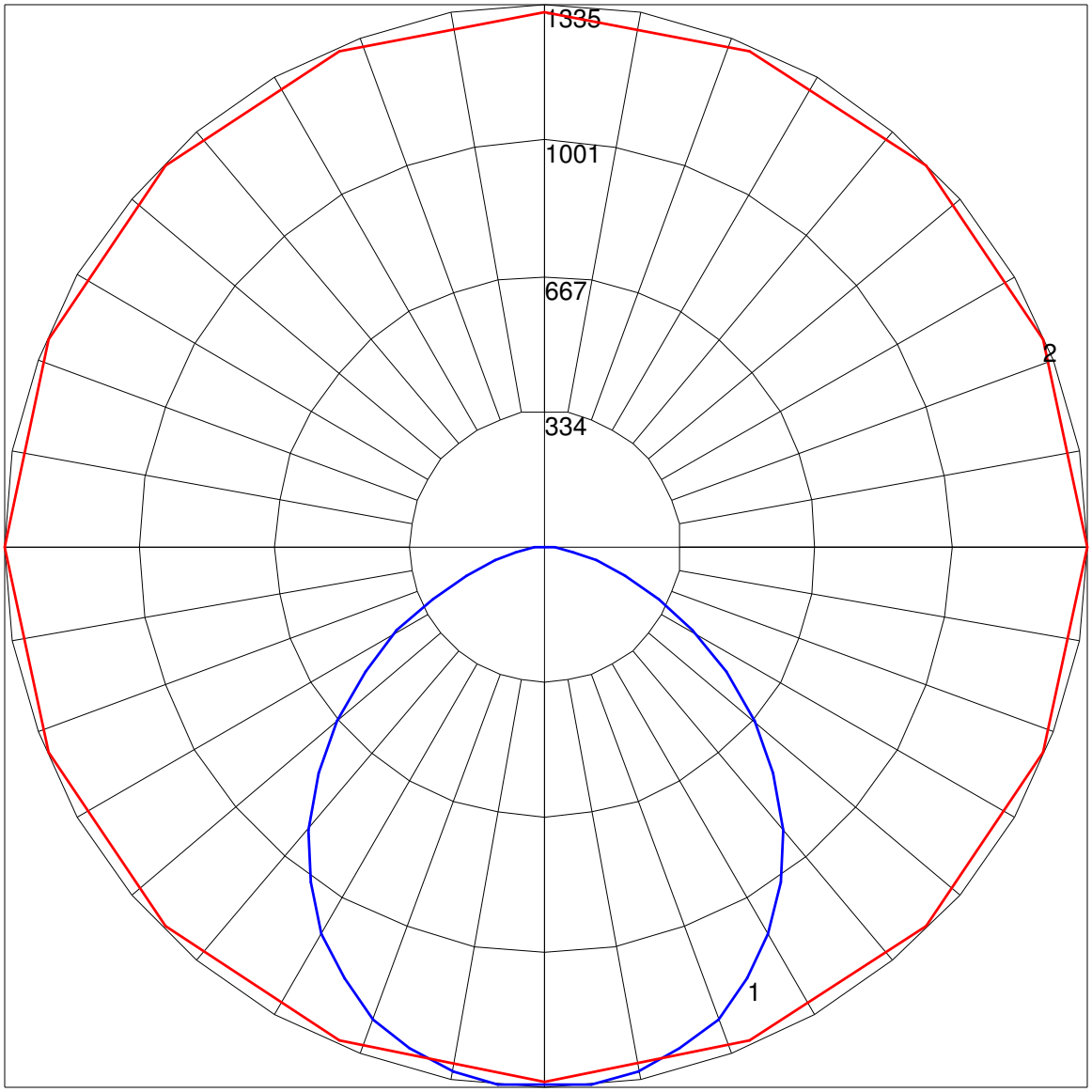
POLAR GRAPH



Maximum Candela = 1334.794 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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