H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-827-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-L43-827-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4068
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	126
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	3822	3964	4093
55	3232	3561	3799
65	2470	3090	3435
75	1717	2740	3387
85	978	2235	2794

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1554.712	1554.712	1554.712	1554.712	1554.712
5	1559.940	1550.530	1548.439	1543.211	1543.211
10	1539.029	1529.619	1528.574	1523.346	1522.300
15	1502.435	1491.980	1490.934	1488.843	1487.798
20	1450.158	1440.749	1439.703	1440.749	1440.749
25	1376.971	1367.561	1373.834	1378.017	1373.834
30	1287.055	1282.873	1289.146	1296.465	1291.237
35	1183.547	1182.501	1196.093	1201.321	1206.549
40	1064.356	1064.356	1087.357	1096.767	1105.132
45	928.436	928.436	962.939	984.895	994.305
50	785.198	786.243	832.247	861.522	875.114
55	636.731	648.232	701.555	732.921	748.604
60	491.402	514.404	567.726	602.229	618.957
65	358.619	388.939	448.535	486.174	498.721
70	241.519	279.158	338.754	377.439	392.076
75	152.648	189.242	243.610	282.295	301.114
80	82.597	113.963	162.058	189.242	208.062
85	29.275	51.231	66.914	66.914	83.643
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	568.04	N.A.	14.00
0-30	1200.33	N.A.	29.50
0-40	1945.9	N.A.	47.80
0-60	3305.8	N.A.	81.30
0-80	3993.56	N.A.	98.20
0-90	4067.98	N.A.	100.00
10-90	3920.82	N.A.	96.40
20-40	1377.87	N.A.	33.90
20-50	2117.17	N.A.	52.00
40-70	1796.49	N.A.	44.20
60-80	687.75	N.A.	16.90
70-80	251.16	N.A.	6.20
80-90	74.42	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	4067.98	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	147.15
10-20	420.88
20-30	632.30
30-40	745.57
40-50	739.31
50-60	620.60
60-70	436.59
70-80	251.16
80-90	74.42
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	15.7	17.3	16.0	17.6	17.9	16.7	18.3	17.1	18.6	18.9
	3H	17.0	18.4	17.3	18.7	19.1	18.5	20.0	18.9	20.3	20.7
	4H	17.4	18.7	17.8	19.1	19.5	19.3	20.7	19.7	21.0	21.4
	6H	17.6	18.9	18.1	19.3	19.7	20.0	21.3	20.4	21.6	22.0
	8H	17.7	18.9	18.1	19.3	19.7	20.2	21.4	20.7	21.8	22.2
	12H	17.7	18.9	18.2	19.3	19.7	20.4	21.5	20.8	21.9	22.4
4H	2H	16.4	17.7	16.8	18.1	18.5	17.2	18.6	17.6	18.9	19.3
	3H	17.9	19.0	18.3	19.4	19.8	19.3	20.4	19.7	20.8	21.2
	4H	18.5	19.5	18.9	19.9	20.3	20.2	21.2	20.6	21.6	22.1
	6H	18.8	19.7	19.3	20.2	20.6	21.1	22.0	21.5	22.4	22.9
	8H	18.9	19.8	19.4	20.2	20.7	21.4	22.2	21.8	22.6	23.1
	12H	19.0	19.8	19.5	20.2	20.7	21.6	22.3	22.0	22.8	23.3
8H	4H	18.9	19.7	19.4	20.2	20.6	20.5	21.3	20.9	21.7	22.2
	6H	19.4	20.1	19.9	20.6	21.1	21.4	22.1	21.9	22.6	23.1
	8H	19.6	20.2	20.1	20.8	21.2	21.8	22.5	22.4	23.0	23.5
	12H	19.7	20.3	20.2	20.8	21.3	22.1	22.7	22.6	23.1	23.7
12H	4H	19.0	19.7	19.5	20.2	20.7	20.5	21.2	20.9	21.7	22.2
	6H	19.6	20.2	20.1	20.7	21.2	21.5	22.1	22.0	22.6	23.1
	8H	19.8	20.4	20.3	20.9	21.4	21.9	22.5	22.4	23.0	23.5

Maximum UGR = 23.7

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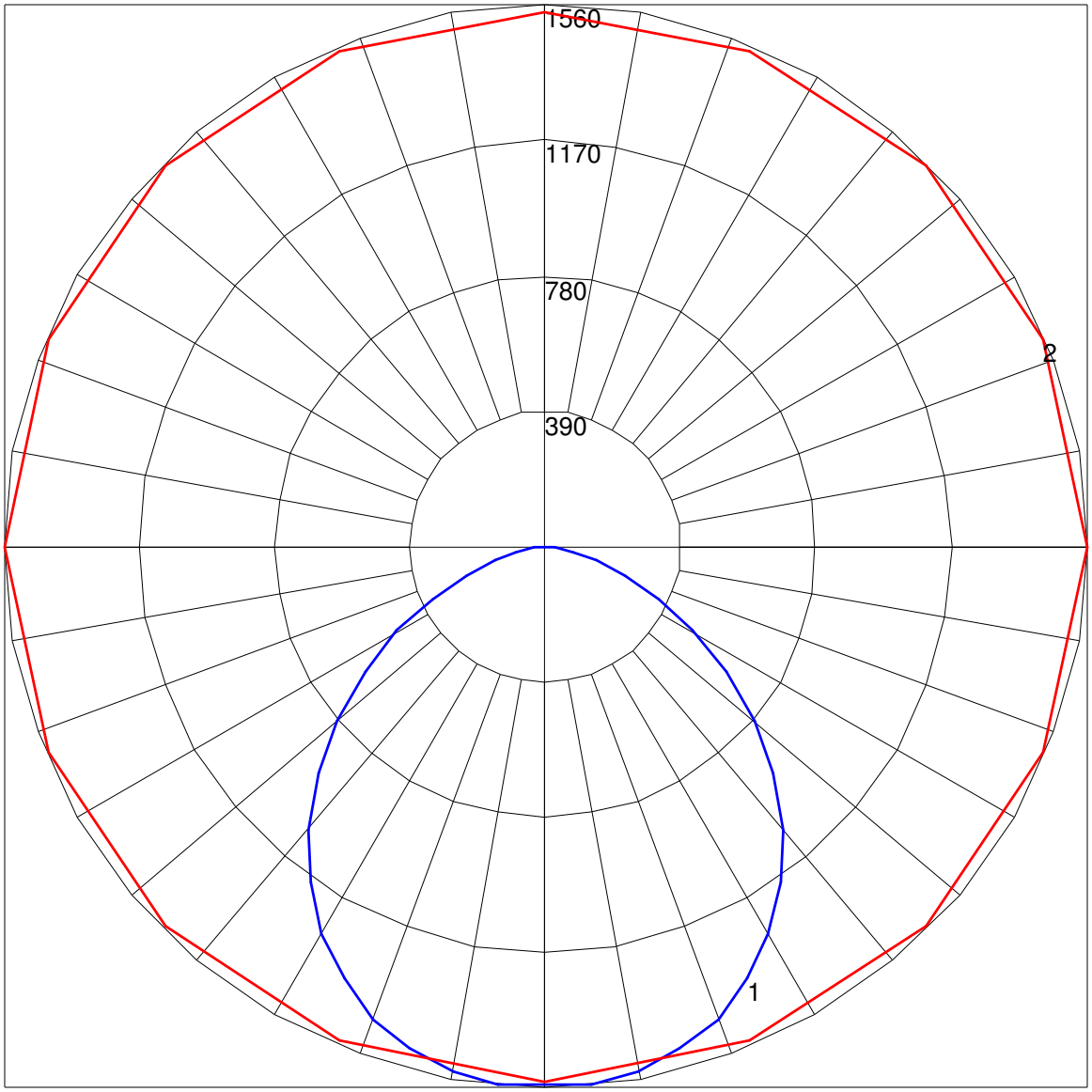
POLAR GRAPH



Maximum Candela = 1559.94 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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