H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-840-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-L43-840-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4320
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	134
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	4059	4210	4347
55	3432	3781	4034
65	2623	3281	3648
75	1823	2910	3596
85	1038	2373	2967

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1650.879	1650.879	1650.879	1650.879	1650.879
5	1656.430	1646.439	1644.218	1638.667	1638.667
10	1634.226	1624.234	1623.124	1617.573	1616.463
15	1595.369	1584.267	1583.157	1580.936	1579.826
20	1539.859	1529.867	1528.756	1529.867	1529.867
25	1462.144	1452.152	1458.813	1463.254	1458.813
30	1366.666	1362.225	1368.887	1376.658	1371.107
35	1256.755	1255.645	1270.078	1275.629	1281.180
40	1130.192	1130.192	1154.616	1164.608	1173.490
45	985.865	985.865	1022.502	1045.816	1055.808
50	833.766	834.876	883.726	914.811	929.244
55	676.117	688.329	744.950	778.256	794.909
60	521.798	546.222	602.843	639.480	657.243
65	380.801	412.997	476.279	516.247	529.569
70	256.458	296.426	359.707	400.785	416.328
75	162.090	200.948	258.678	299.756	319.740
80	87.706	121.013	172.082	200.948	220.931
85	31.086	54.400	71.053	71.053	88.817
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	603.17	N.A.	14.00
0-30	1274.58	N.A.	29.50
0-40	2066.27	N.A.	47.80
0-60	3510.29	N.A.	81.30
0-80	4240.58	N.A.	98.20
0-90	4319.6	N.A.	100.00
10-90	4163.35	N.A.	96.40
20-40	1463.1	N.A.	33.90
20-50	2248.13	N.A.	52.00
40-70	1907.62	N.A.	44.20
60-80	730.29	N.A.	16.90
70-80	266.70	N.A.	6.20
80-90	79.02	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	4319.6	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	156.26
10-20	446.92
20-30	671.41
30-40	791.69
40-50	785.04
50-60	658.98
60-70	463.60
70-80	266.70
80-90	79.02
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	15.9	17.5	16.2	17.8	18.1	16.9	18.5	17.3	18.8	19.1
	3H	17.2	18.6	17.5	18.9	19.3	18.7	20.2	19.1	20.5	20.9
	4H	17.6	18.9	18.0	19.3	19.7	19.5	20.9	19.9	21.2	21.6
	6H	17.8	19.1	18.3	19.5	19.9	20.2	21.5	20.6	21.8	22.2
	8H	17.9	19.1	18.3	19.5	19.9	20.4	21.6	20.9	22.0	22.4
	12H	17.9	19.1	18.4	19.5	19.9	20.6	21.7	21.0	22.1	22.6
4H	2H	16.6	17.9	17.0	18.3	18.7	17.4	18.8	17.8	19.1	19.5
	3H	18.1	19.2	18.5	19.6	20.0	19.5	20.6	19.9	21.0	21.4
	4H	18.7	19.7	19.1	20.1	20.5	20.4	21.4	20.8	21.8	22.3
	6H	19.0	19.9	19.5	20.4	20.8	21.3	22.2	21.7	22.6	23.1
	8H	19.1	20.0	19.6	20.4	20.9	21.6	22.4	22.0	22.8	23.3
	12H	19.2	20.0	19.7	20.4	20.9	21.8	22.5	22.2	23.0	23.5
8H	4H	19.1	19.9	19.6	20.4	20.8	20.7	21.5	21.1	21.9	22.4
	6H	19.6	20.3	20.1	20.8	21.3	21.6	22.3	22.1	22.8	23.3
	8H	19.8	20.4	20.3	21.0	21.4	22.0	22.7	22.6	23.2	23.7
	12H	19.9	20.5	20.4	21.0	21.5	22.3	22.9	22.8	23.3	23.9
12H	4H	19.2	19.9	19.7	20.4	20.9	20.7	21.4	21.1	21.9	22.4
	6H	19.8	20.4	20.3	20.9	21.4	21.7	22.3	22.2	22.8	23.3
	8H	20.0	20.6	20.5	21.1	21.6	22.1	22.7	22.6	23.2	23.7

Maximum UGR = 23.9

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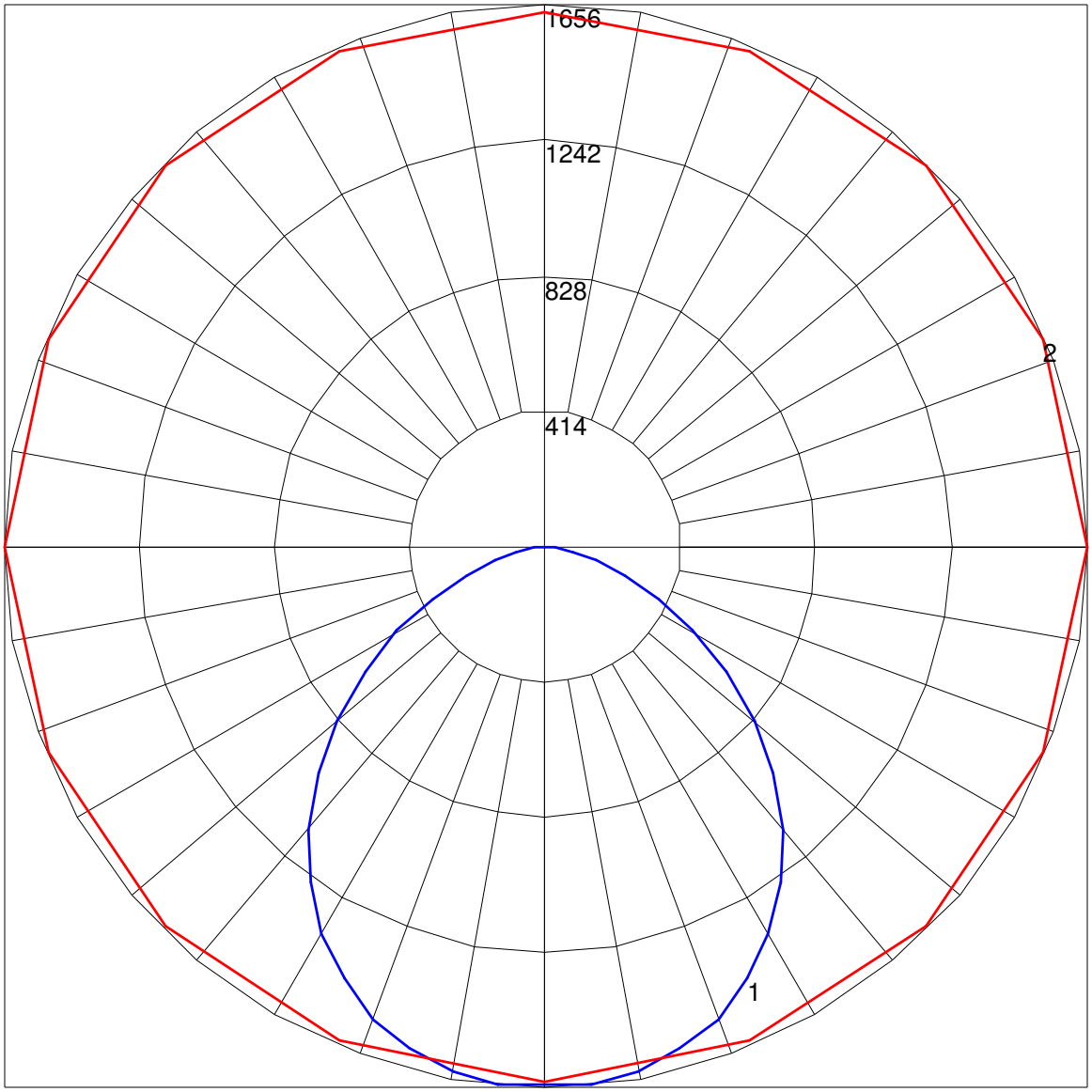
POLAR GRAPH



Maximum Candela = 1656.43 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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