H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-835-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-L52-835-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5331
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	41.6
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	5009	5195	5364
55	4235	4666	4979
65	3237	4049	4502
75	2250	3591	4438
85	1281	2929	3661

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2037.316	2037.316	2037.316	2037.316	2037.316
5	2044.167	2031.836	2029.096	2022.245	2022.245
10	2016.765	2004.434	2003.064	1996.214	1994.844
15	1968.812	1955.111	1953.741	1951.001	1949.631
20	1900.308	1887.977	1886.607	1887.977	1887.977
25	1804.402	1792.071	1800.292	1805.772	1800.292
30	1686.575	1681.094	1689.315	1698.905	1692.055
35	1550.936	1549.566	1567.377	1574.228	1581.078
40	1394.747	1394.747	1424.888	1437.219	1448.180
45	1216.635	1216.635	1261.848	1290.620	1302.951
50	1028.934	1030.304	1090.588	1128.950	1146.761
55	834.382	849.453	919.327	960.430	980.981
60	643.940	674.082	743.956	789.169	811.090
65	469.939	509.672	587.766	637.090	653.531
70	316.490	365.813	443.908	494.601	513.782
75	200.032	247.985	319.230	369.923	394.584
80	108.237	149.339	212.363	247.985	272.647
85	38.362	67.134	87.685	87.685	109.607
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	744.36	N.A.	14.00
0-30	1572.93	N.A.	29.50
0-40	2549.94	N.A.	47.80
0-60	4331.97	N.A.	81.30
0-80	5233.21	N.A.	98.20
0-90	5330.73	N.A.	100.00
10-90	5137.9	N.A.	96.40
20-40	1805.58	N.A.	33.90
20-50	2774.37	N.A.	52.00
40-70	2354.15	N.A.	44.20
60-80	901.24	N.A.	16.90
70-80	329.12	N.A.	6.20
80-90	97.52	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	5330.73	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	192.83
10-20	551.53
20-30	828.57
30-40	977.00
40-50	968.80
50-60	813.24
60-70	572.12
70-80	329.12
80-90	97.52
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	16.6	18.2	16.9	18.5	18.8	17.6	19.2	18.0	19.5	19.8
	3H	17.9	19.3	18.2	19.6	20.0	19.4	20.9	19.8	21.2	21.6
	4H	18.3	19.6	18.7	20.0	20.4	20.2	21.6	20.6	21.9	22.3
	6H	18.5	19.8	19.0	20.2	20.6	20.9	22.2	21.3	22.5	22.9
	8H	18.6	19.8	19.0	20.2	20.6	21.1	22.3	21.6	22.7	23.1
	12H	18.6	19.8	19.1	20.2	20.6	21.3	22.4	21.7	22.8	23.3
4H	2H	17.3	18.6	17.7	19.0	19.4	18.1	19.5	18.5	19.8	20.2
	3H	18.8	19.9	19.2	20.3	20.7	20.2	21.3	20.6	21.7	22.1
	4H	19.4	20.4	19.8	20.8	21.2	21.1	22.1	21.5	22.5	23.0
	6H	19.7	20.6	20.2	21.1	21.5	22.0	22.9	22.4	23.3	23.8
	8H	19.8	20.7	20.3	21.1	21.6	22.3	23.1	22.7	23.5	24.0
	12H	19.9	20.7	20.4	21.1	21.6	22.5	23.2	22.9	23.7	24.2
8H	4H	19.8	20.6	20.3	21.1	21.5	21.4	22.2	21.8	22.6	23.1
	6H	20.3	21.0	20.8	21.5	22.0	22.3	23.0	22.8	23.5	24.0
	8H	20.5	21.1	21.0	21.7	22.1	22.7	23.4	23.3	23.9	24.4
	12H	20.6	21.2	21.1	21.7	22.2	23.0	23.6	23.5	24.0	24.6
12H	4H	19.9	20.6	20.4	21.1	21.6	21.4	22.1	21.8	22.6	23.1
	6H	20.5	21.1	21.0	21.6	22.1	22.4	23.0	22.9	23.5	24.0
	8H	20.7	21.3	21.2	21.8	22.3	22.8	23.4	23.3	23.9	24.4

Maximum UGR = 24.6

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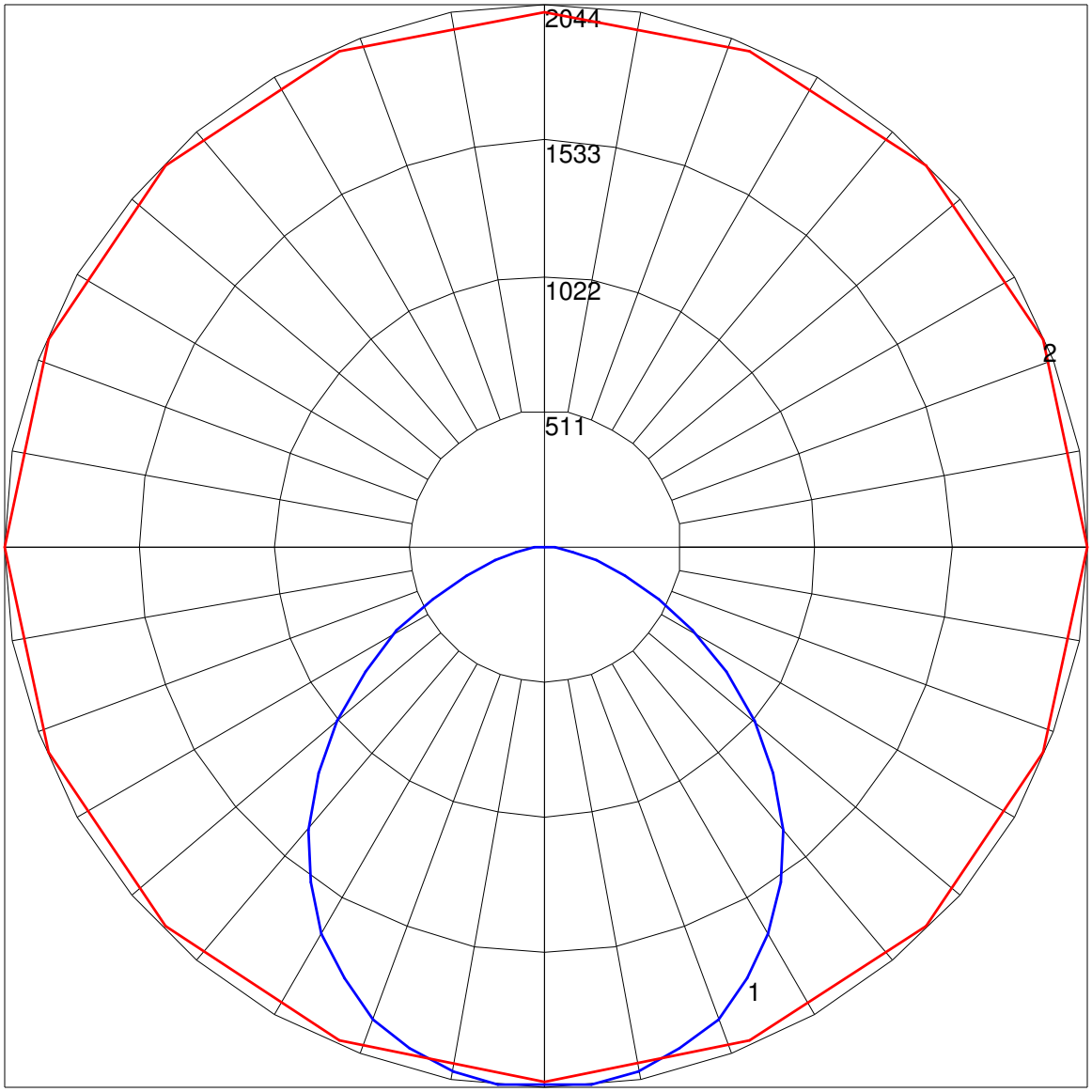
POLAR GRAPH



Maximum Candela = 2044.167 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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