H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-835-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-L43-835-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4194
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	130
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	3941	4087	4220
55	3332	3671	3917
65	2547	3185	3542
75	1770	2825	3492
85	1008	2304	2880

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1602.796	1602.796	1602.796	1602.796	1602.796
5	1608.185	1598.484	1596.328	1590.939	1590.939
10	1586.628	1576.927	1575.849	1570.460	1569.382
15	1548.902	1538.123	1537.046	1534.890	1533.812
20	1495.009	1485.308	1484.230	1485.308	1485.308
25	1419.557	1409.857	1416.324	1420.635	1416.324
30	1326.860	1322.549	1329.016	1336.561	1331.172
35	1220.151	1219.073	1233.086	1238.475	1243.864
40	1097.274	1097.274	1120.987	1130.688	1139.311
45	957.150	957.150	992.720	1015.355	1025.056
50	809.482	810.560	857.986	888.167	902.179
55	656.424	668.281	723.252	755.588	771.756
60	506.600	530.313	585.285	620.854	638.100
65	369.710	400.968	462.407	501.210	514.145
70	248.988	287.792	349.231	389.112	404.202
75	157.369	195.095	251.144	291.025	310.427
80	85.152	117.488	167.070	195.095	214.497
85	30.180	52.816	68.984	68.984	86.230
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	585.60	N.A.	14.00
0-30	1237.46	N.A.	29.50
0-40	2006.09	N.A.	47.80
0-60	3408.05	N.A.	81.30
0-80	4117.07	N.A.	98.20
0-90	4193.79	N.A.	100.00
10-90	4042.08	N.A.	96.40
20-40	1420.48	N.A.	33.90
20-50	2182.65	N.A.	52.00
40-70	1852.05	N.A.	44.20
60-80	709.02	N.A.	16.90
70-80	258.93	N.A.	6.20
80-90	76.72	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	4193.79	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	151.70
10-20	433.90
20-30	651.85
30-40	768.63
40-50	762.17
50-60	639.79
60-70	450.10
70-80	258.93
80-90	76.72
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	15.8	17.4	16.1	17.7	18.0	16.8	18.4	17.2	18.7	19.0
	3H	17.1	18.5	17.4	18.8	19.2	18.6	20.1	19.0	20.4	20.8
	4H	17.5	18.8	17.9	19.2	19.6	19.4	20.8	19.8	21.1	21.5
	6H	17.7	19.0	18.2	19.4	19.8	20.1	21.4	20.5	21.7	22.1
	8H	17.8	19.0	18.2	19.4	19.8	20.3	21.5	20.8	21.9	22.3
	12H	17.8	19.0	18.3	19.4	19.8	20.5	21.6	20.9	22.0	22.5
4H	2H	16.5	17.8	16.9	18.2	18.6	17.3	18.7	17.7	19.0	19.4
	3H	18.0	19.1	18.4	19.5	19.9	19.4	20.5	19.8	20.9	21.3
	4H	18.6	19.6	19.0	20.0	20.4	20.3	21.3	20.7	21.7	22.2
	6H	18.9	19.8	19.4	20.3	20.7	21.2	22.1	21.6	22.5	23.0
	8H	19.0	19.9	19.5	20.3	20.8	21.5	22.3	21.9	22.7	23.2
	12H	19.1	19.9	19.6	20.3	20.8	21.7	22.4	22.1	22.9	23.4
8H	4H	19.0	19.8	19.5	20.3	20.7	20.6	21.4	21.0	21.8	22.3
	6H	19.5	20.2	20.0	20.7	21.2	21.5	22.2	22.0	22.7	23.2
	8H	19.7	20.3	20.2	20.9	21.3	21.9	22.6	22.5	23.1	23.6
	12H	19.8	20.4	20.3	20.9	21.4	22.2	22.8	22.7	23.2	23.8
12H	4H	19.1	19.8	19.6	20.3	20.8	20.6	21.3	21.0	21.8	22.3
	6H	19.7	20.3	20.2	20.8	21.3	21.6	22.2	22.1	22.7	23.2
	8H	19.9	20.5	20.4	21.0	21.5	22.0	22.6	22.5	23.1	23.6

Maximum UGR = 23.8

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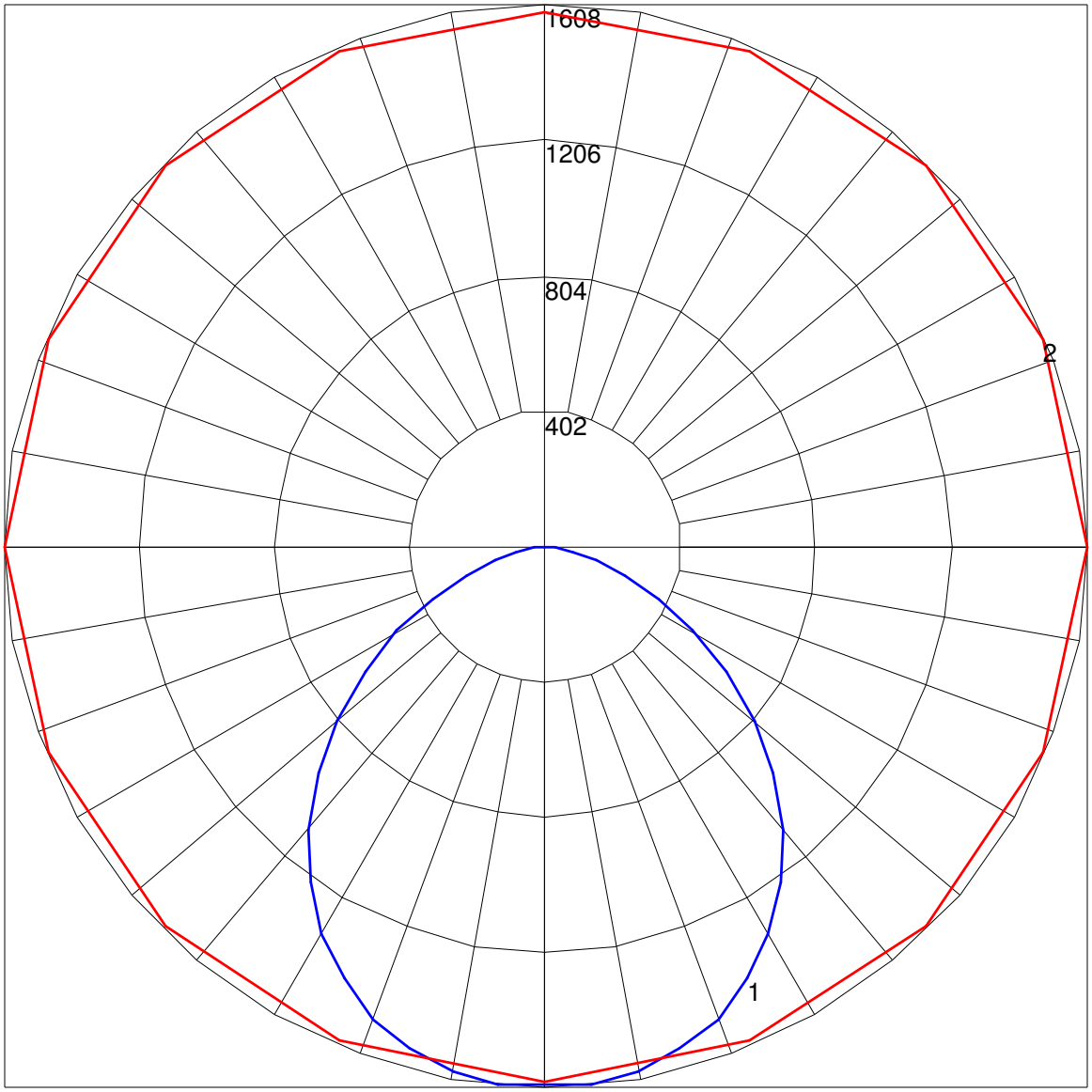
POLAR GRAPH



Maximum Candela = 1608.185 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.)