H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-840-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] BALLABS TEST NO. 20789.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1-84 LED 22"ARRAY 2x2 LUMINAIRE
[MORE] WHITE REFLECTOR w/FROST SQUARED RIBBED LENS
[MORE] ADVANCE #C1042C092V045CNN1
[LUMCAT] PT-22-L61-840-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6443
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	50.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5760	5675	5595
55	5176	5222	5368
65	4531	4941	5549
75	3531	4975	6431
85	1837	4631	6238

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2553.602	2553.602	2553.602	2553.602	2553.602
5	2553.602	2537.127	2526.536	2527.713	2525.359
10	2499.470	2486.526	2475.935	2471.227	2467.697
15	2411.212	2401.798	2390.030	2380.616	2378.262
20	2311.186	2295.888	2267.645	2261.762	2255.878
25	2165.266	2159.382	2126.432	2109.958	2099.367
30	1999.341	1989.926	1967.568	1941.679	1924.027
35	1812.233	1814.587	1786.344	1760.455	1749.864
40	1620.419	1626.303	1598.060	1580.409	1573.348
45	1436.842	1433.312	1415.660	1409.776	1395.655
50	1241.498	1245.028	1228.553	1242.674	1230.907
55	1047.330	1057.921	1056.744	1086.163	1086.163
60	856.692	863.753	894.349	934.359	952.011
65	675.469	693.120	736.661	794.323	827.273
70	491.892	522.488	595.448	669.585	709.595
75	322.436	376.568	454.235	540.140	587.211
80	170.632	231.825	318.906	403.634	447.174
85	56.485	94.142	142.390	174.163	191.814
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	913.84	N.A.	14.20
0-30	1894.8	N.A.	29.40
0-40	3012.07	N.A.	46.70
0-60	5063.59	N.A.	78.60
0-80	6284.56	N.A.	97.50
0-90	6443.32	N.A.	100.00
10-90	6203.22	N.A.	96.30
20-40	2098.22	N.A.	32.60
20-50	3194.1	N.A.	49.60
40-70	2790.49	N.A.	43.30
60-80	1220.97	N.A.	18.90
70-80	482.00	N.A.	7.50
80-90	158.76	N.A.	2.50
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	6443.32	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	240.10
10-20	673.74
20-30	980.96
30-40	1117.27
40-50	1095.88
50-60	955.64
60-70	738.97
70-80	482.00
80-90	158.76
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	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	80	72	65	88	78	71	64	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	51
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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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	17.5	19.1	17.9	19.4	19.7	17.9	19.5	18.2	19.8	20.1
	3H	19.1	20.6	19.5	20.9	21.3	20.1	21.6	20.5	21.9	22.3
	4H	19.7	21.1	20.1	21.4	21.8	21.2	22.6	21.6	22.9	23.3
	6H	20.1	21.3	20.5	21.7	22.1	22.2	23.5	22.6	23.9	24.3
	8H	20.2	21.4	20.6	21.8	22.2	22.6	23.8	23.0	24.2	24.6
	12H	20.2	21.4	20.6	21.8	22.2	22.9	24.0	23.3	24.4	24.9
4H	2H	18.2	19.5	18.6	19.9	20.3	18.5	19.9	18.9	20.2	20.6
	3H	20.0	21.2	20.5	21.6	22.0	21.0	22.2	21.4	22.5	22.9
	4H	20.8	21.8	21.2	22.2	22.7	22.2	23.3	22.7	23.7	24.1
	6H	21.3	22.2	21.7	22.7	23.1	23.4	24.4	23.9	24.8	25.3
	8H	21.4	22.3	21.9	22.7	23.2	23.9	24.8	24.4	25.2	25.7
	12H	21.5	22.3	22.0	22.8	23.2	24.2	25.0	24.7	25.5	25.9
8H	4H	21.3	22.2	21.7	22.6	23.1	22.5	23.4	23.0	23.9	24.3
	6H	22.0	22.7	22.5	23.2	23.7	23.9	24.7	24.4	25.1	25.6
	8H	22.2	22.8	22.7	23.3	23.8	24.5	25.1	25.0	25.7	26.1
	12H	22.3	22.9	22.8	23.4	24.0	24.9	25.5	25.4	26.0	26.5
12H	4H	21.4	22.2	21.9	22.7	23.1	22.6	23.4	23.0	23.8	24.3
	6H	22.1	22.8	22.7	23.3	23.8	24.0	24.7	24.5	25.1	25.6
	8H	22.4	23.0	22.9	23.5	24.1	24.6	25.2	25.1	25.7	26.2

Maximum UGR = 26.5

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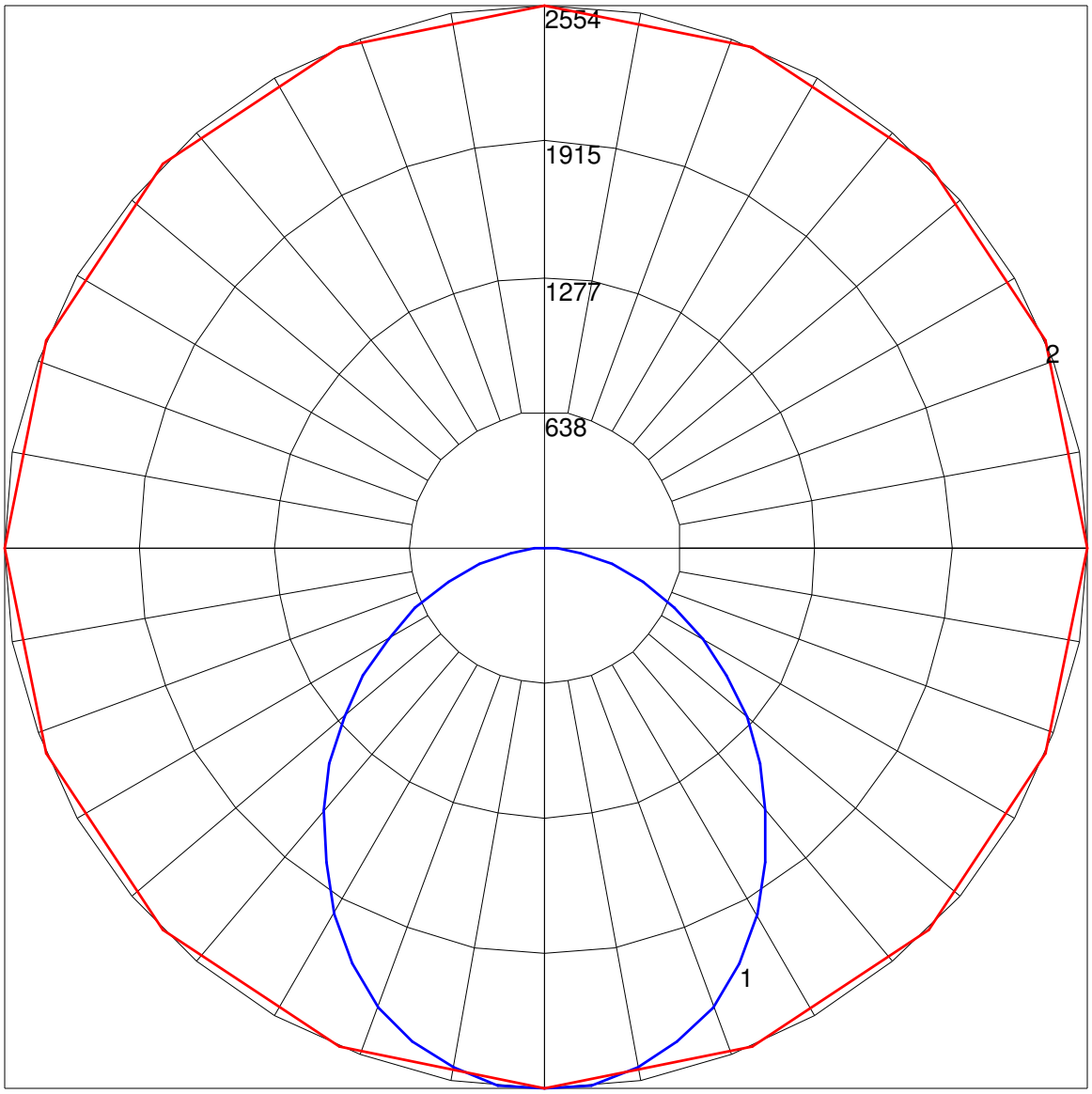
POLAR GRAPH



Maximum Candela = 2553.602 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

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