H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-835-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-L61-835-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6256
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	125
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	5592	5510	5432
55	5025	5070	5211
65	4399	4797	5387
75	3429	4830	6244
85	1784	4496	6057

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2479.225	2479.225	2479.225	2479.225	2479.225
5	2479.225	2463.230	2452.948	2454.090	2451.805
10	2426.670	2414.103	2403.820	2399.250	2395.823
15	2340.983	2331.843	2320.418	2311.278	2308.993
20	2243.870	2229.018	2201.598	2195.885	2190.173
25	2102.200	2096.488	2064.498	2048.503	2038.220
30	1941.108	1931.968	1910.260	1885.125	1867.988
35	1759.450	1761.735	1734.315	1709.180	1698.898
40	1573.223	1578.935	1551.515	1534.378	1527.523
45	1394.993	1391.565	1374.428	1368.715	1355.005
50	1205.338	1208.765	1192.770	1206.480	1195.055
55	1016.825	1027.108	1025.965	1054.528	1054.528
60	831.740	838.595	868.300	907.145	924.283
65	655.795	672.933	715.205	771.188	803.178
70	477.565	507.270	578.105	650.083	688.928
75	313.045	365.600	441.005	524.408	570.108
80	165.663	225.073	309.618	391.878	434.150
85	54.840	91.400	138.243	169.090	186.228
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	887.23	N.A.	14.20
0-30	1839.61	N.A.	29.40
0-40	2924.34	N.A.	46.70
0-60	4916.11	N.A.	78.60
0-80	6101.52	N.A.	97.50
0-90	6255.65	N.A.	100.00
10-90	6022.55	N.A.	96.30
20-40	2037.11	N.A.	32.60
20-50	3101.07	N.A.	49.60
40-70	2709.22	N.A.	43.30
60-80	1185.41	N.A.	18.90
70-80	467.97	N.A.	7.50
80-90	154.13	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	6255.65	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	233.11
10-20	654.12
20-30	952.38
30-40	1084.73
40-50	1063.96
50-60	927.81
60-70	717.44
70-80	467.97
80-90	154.13
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	17.4	19.0	17.8	19.3	19.6	17.8	19.4	18.1	19.7	20.0
	3H	19.0	20.5	19.4	20.8	21.2	20.0	21.5	20.4	21.8	22.2
	4H	19.6	21.0	20.0	21.3	21.7	21.1	22.5	21.5	22.8	23.2
	6H	19.9	21.2	20.4	21.6	22.0	22.1	23.4	22.5	23.8	24.2
	8H	20.1	21.3	20.5	21.7	22.1	22.5	23.7	22.9	24.1	24.5
	12H	20.1	21.3	20.5	21.7	22.1	22.8	23.9	23.2	24.3	24.8
4H	2H	18.1	19.4	18.5	19.8	20.2	18.4	19.8	18.8	20.1	20.5
	3H	19.9	21.1	20.4	21.5	21.9	20.9	22.0	21.3	22.4	22.8
	4H	20.7	21.7	21.1	22.1	22.6	22.1	23.2	22.6	23.6	24.0
	6H	21.2	22.1	21.6	22.6	23.0	23.3	24.3	23.8	24.7	25.2
	8H	21.3	22.2	21.8	22.6	23.1	23.8	24.7	24.2	25.1	25.6
	12H	21.4	22.2	21.9	22.7	23.1	24.1	24.9	24.6	25.4	25.8
8H	4H	21.2	22.1	21.6	22.5	23.0	22.4	23.3	22.9	23.8	24.2
	6H	21.9	22.6	22.4	23.1	23.6	23.8	24.6	24.3	25.0	25.5
	8H	22.1	22.7	22.6	23.2	23.7	24.4	25.0	24.9	25.6	26.0
	12H	22.2	22.8	22.7	23.3	23.9	24.8	25.4	25.3	25.9	26.4
12H	4H	21.3	22.1	21.8	22.6	23.0	22.5	23.3	22.9	23.7	24.2
	6H	22.0	22.7	22.6	23.2	23.7	23.9	24.6	24.4	25.0	25.5
	8H	22.3	22.9	22.8	23.4	24.0	24.5	25.1	25.0	25.6	26.1

Maximum UGR = 26.4

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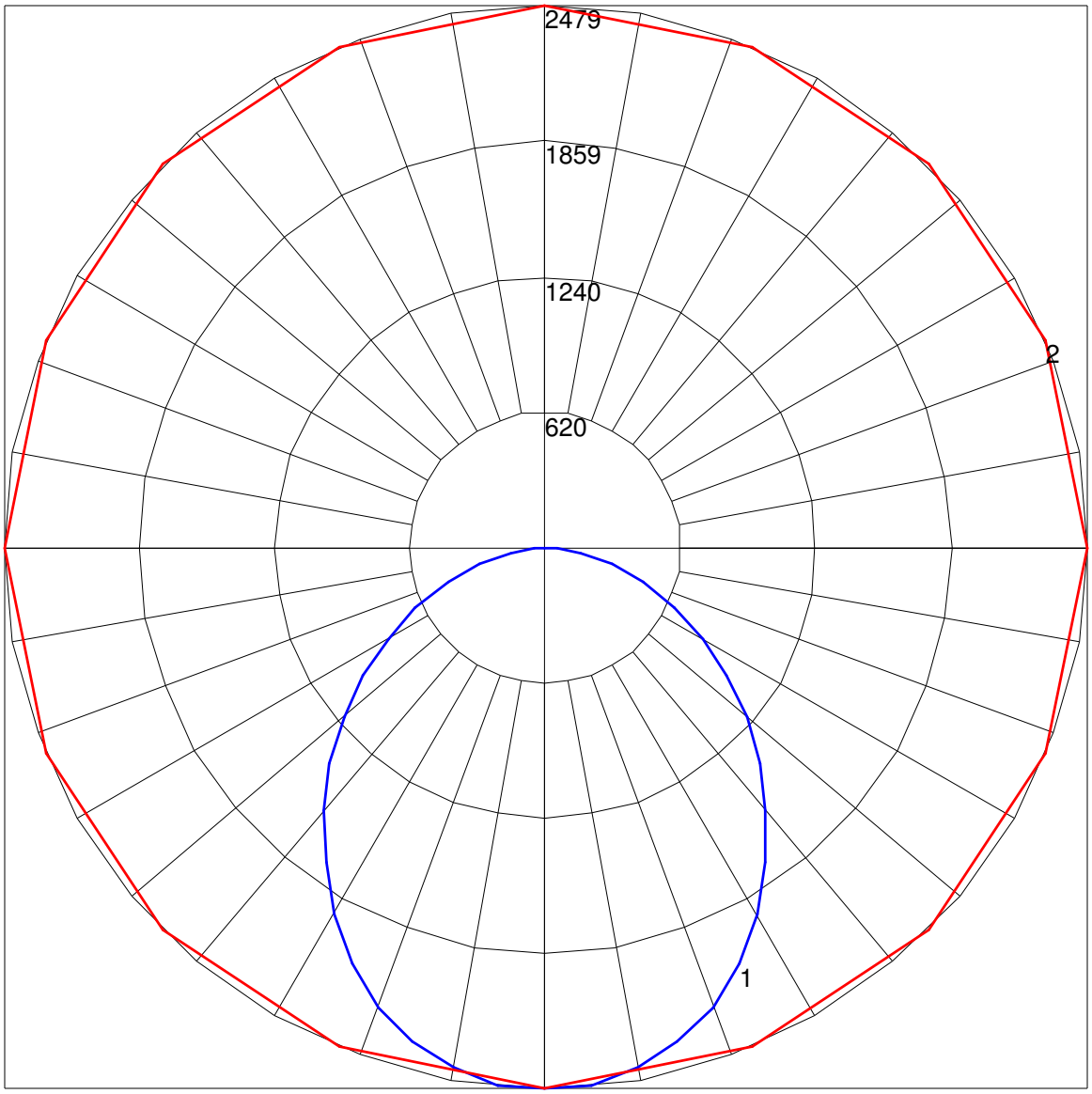
POLAR GRAPH



Maximum Candela = 2479.225 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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