H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-850-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-L52-850-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5821
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	140
Total Luminaire Watts	41.6
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	5203	5127	5054
55	4676	4718	4849
65	4093	4464	5013
75	3190	4494	5810
85	1660	4184	5636

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2306.892	2306.892	2306.892	2306.892	2306.892
5	2306.892	2292.009	2282.441	2283.504	2281.378
10	2257.990	2246.297	2236.729	2232.476	2229.287
15	2178.259	2169.754	2159.124	2150.619	2148.493
20	2087.897	2074.077	2048.563	2043.247	2037.932
25	1956.075	1950.759	1920.993	1906.110	1896.542
30	1806.180	1797.675	1777.476	1754.089	1738.142
35	1637.149	1639.276	1613.762	1590.374	1580.806
40	1463.867	1469.182	1443.668	1427.722	1421.343
45	1298.026	1294.836	1278.890	1273.575	1260.818
50	1121.554	1124.743	1109.860	1122.617	1111.986
55	946.145	955.713	954.649	981.227	981.227
60	773.925	780.304	807.944	844.089	860.035
65	610.210	626.156	665.491	717.582	747.348
70	444.369	472.009	537.921	604.895	641.040
75	291.285	340.187	410.350	487.956	530.479
80	154.147	209.428	288.096	364.638	403.972
85	51.028	85.047	128.633	157.336	173.283
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	825.56	N.A.	14.20
0-30	1711.74	N.A.	29.40
0-40	2721.06	N.A.	46.70
0-60	4574.39	N.A.	78.60
0-80	5677.4	N.A.	97.50
0-90	5820.82	N.A.	100.00
10-90	5603.91	N.A.	96.30
20-40	1895.51	N.A.	32.60
20-50	2885.51	N.A.	49.60
40-70	2520.9	N.A.	43.30
60-80	1103.01	N.A.	18.90
70-80	435.44	N.A.	7.50
80-90	143.42	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	5820.82	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	216.90
10-20	608.65
20-30	886.18
30-40	1009.33
40-50	990.01
50-60	863.32
60-70	667.57
70-80	435.44
80-90	143.42
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	17.1	18.7	17.5	19.0	19.3	17.5	19.1	17.8	19.4	19.7
	3H	18.7	20.2	19.1	20.5	20.9	19.7	21.2	20.1	21.5	21.9
	4H	19.3	20.7	19.7	21.0	21.4	20.8	22.2	21.2	22.5	22.9
	6H	19.6	20.9	20.1	21.3	21.7	21.8	23.1	22.2	23.5	23.9
	8H	19.8	21.0	20.2	21.4	21.8	22.2	23.4	22.6	23.8	24.2
	12H	19.8	21.0	20.2	21.4	21.8	22.5	23.6	22.9	24.0	24.5
4H	2H	17.8	19.1	18.2	19.5	19.9	18.1	19.5	18.5	19.8	20.2
	3H	19.6	20.8	20.1	21.2	21.6	20.6	21.7	21.0	22.1	22.5
	4H	20.4	21.4	20.8	21.8	22.3	21.8	22.9	22.3	23.3	23.7
	6H	20.9	21.8	21.3	22.3	22.7	23.0	24.0	23.5	24.4	24.9
	8H	21.0	21.9	21.5	22.3	22.8	23.5	24.4	23.9	24.8	25.3
	12H	21.1	21.9	21.6	22.4	22.8	23.8	24.6	24.3	25.1	25.5
8H	4H	20.9	21.8	21.3	22.2	22.7	22.1	23.0	22.6	23.5	23.9
	6H	21.6	22.3	22.1	22.8	23.3	23.5	24.3	24.0	24.7	25.2
	8H	21.8	22.4	22.3	22.9	23.4	24.1	24.7	24.6	25.3	25.7
	12H	21.9	22.5	22.4	23.0	23.6	24.5	25.1	25.0	25.6	26.1
12H	4H	21.0	21.8	21.5	22.3	22.7	22.2	23.0	22.6	23.4	23.9
	6H	21.7	22.4	22.3	22.9	23.4	23.6	24.3	24.1	24.7	25.2
	8H	22.0	22.6	22.5	23.1	23.7	24.2	24.8	24.7	25.3	25.8

Maximum UGR = 26.1

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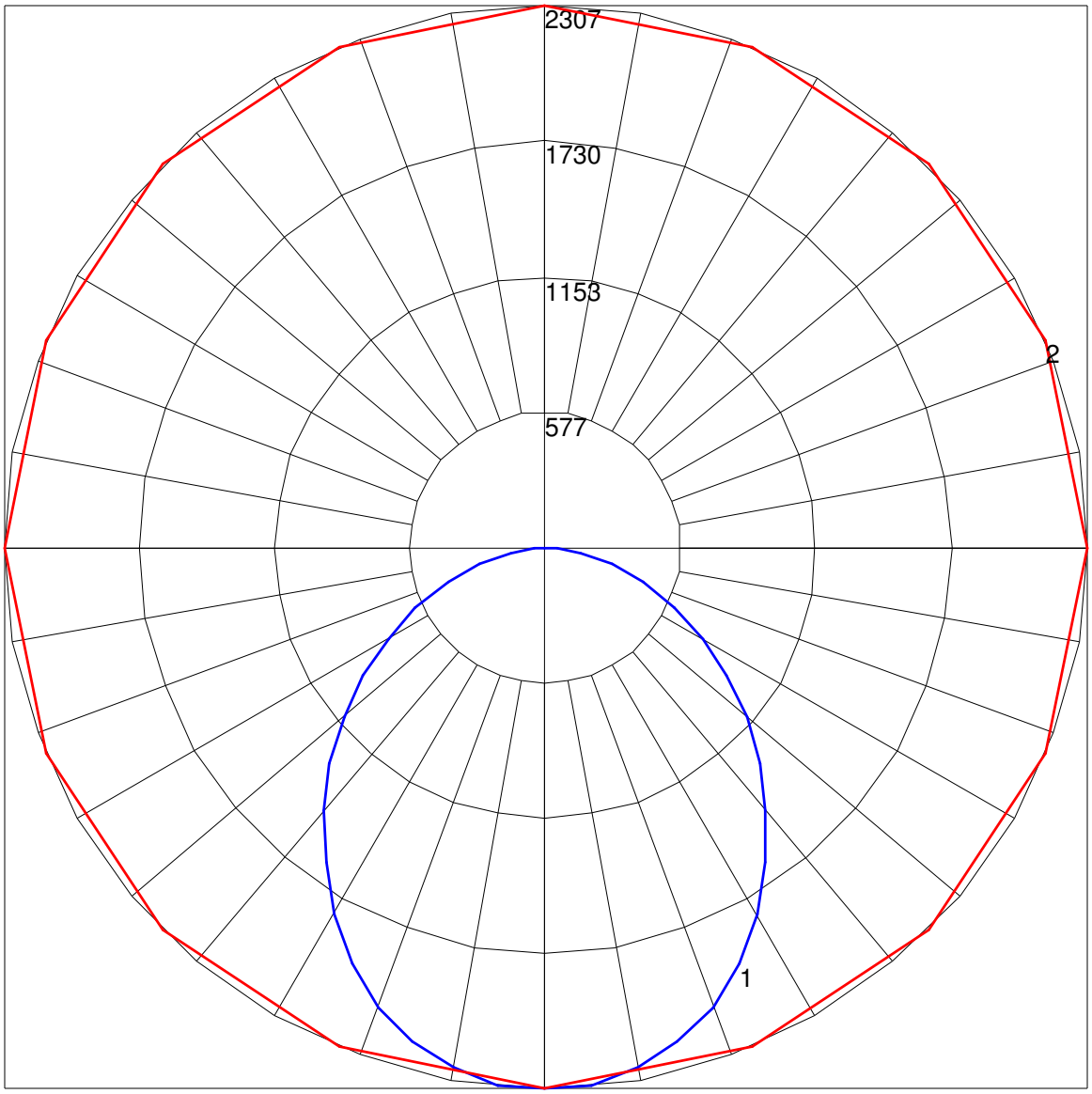
POLAR GRAPH



Maximum Candela = 2306.892 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.)