H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-935-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-L61-935-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5255
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
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	4697	4628	4563
55	4221	4259	4378
65	3695	4030	4525
75	2880	4057	5245
85	1498	3777	5088

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2082.550	2082.550	2082.550	2082.550	2082.550
5	2082.550	2069.114	2060.477	2061.436	2059.517
10	2038.404	2027.847	2019.210	2015.371	2012.492
15	1966.426	1958.749	1949.152	1941.474	1939.555
20	1884.852	1872.375	1849.343	1844.544	1839.746
25	1765.849	1761.050	1734.179	1720.743	1712.106
30	1630.531	1622.853	1604.619	1583.506	1569.110
35	1477.939	1479.858	1456.825	1435.712	1427.075
40	1321.507	1326.306	1303.273	1288.878	1283.119
45	1171.794	1168.915	1154.520	1149.721	1138.205
50	1012.484	1015.363	1001.927	1013.444	1003.847
55	854.133	862.771	861.811	885.803	885.803
60	698.662	704.420	729.372	762.002	776.398
65	550.868	565.264	600.772	647.798	674.669
70	401.155	426.107	485.608	546.070	578.699
75	262.958	307.104	370.444	440.502	478.891
80	139.157	189.061	260.079	329.177	364.686
85	46.066	76.776	116.124	142.036	156.431
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	745.27	N.A.	14.20
0-30	1545.27	N.A.	29.40
0-40	2456.44	N.A.	46.70
0-60	4129.53	N.A.	78.60
0-80	5125.28	N.A.	97.50
0-90	5254.75	N.A.	100.00
10-90	5058.94	N.A.	96.30
20-40	1711.17	N.A.	32.60
20-50	2604.9	N.A.	49.60
40-70	2275.74	N.A.	43.30
60-80	995.74	N.A.	18.90
70-80	393.09	N.A.	7.50
80-90	129.47	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	5254.75	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	195.81
10-20	549.46
20-30	800.00
30-40	911.17
40-50	893.73
50-60	779.36
60-70	602.65
70-80	393.09
80-90	129.47
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	16.8	18.4	17.2	18.7	19.0	17.2	18.8	17.5	19.1	19.4
	3H	18.4	19.9	18.8	20.2	20.6	19.4	20.9	19.8	21.2	21.6
	4H	19.0	20.4	19.4	20.7	21.1	20.5	21.9	20.9	22.2	22.6
	6H	19.3	20.6	19.8	21.0	21.4	21.5	22.8	21.9	23.2	23.6
	8H	19.5	20.7	19.9	21.1	21.5	21.9	23.1	22.3	23.5	23.9
	12H	19.5	20.7	19.9	21.1	21.5	22.2	23.3	22.6	23.7	24.2
4H	2H	17.5	18.8	17.9	19.2	19.6	17.8	19.2	18.2	19.5	19.9
	3H	19.3	20.5	19.8	20.9	21.3	20.3	21.4	20.7	21.8	22.2
	4H	20.1	21.1	20.5	21.5	22.0	21.5	22.6	22.0	23.0	23.4
	6H	20.6	21.5	21.0	22.0	22.4	22.7	23.7	23.2	24.1	24.6
	8H	20.7	21.6	21.2	22.0	22.5	23.2	24.1	23.6	24.5	25.0
	12H	20.8	21.6	21.3	22.1	22.5	23.5	24.3	24.0	24.8	25.2
8H	4H	20.6	21.5	21.0	21.9	22.4	21.8	22.7	22.3	23.2	23.6
	6H	21.3	22.0	21.8	22.5	23.0	23.2	24.0	23.7	24.4	24.9
	8H	21.5	22.1	22.0	22.6	23.1	23.8	24.4	24.3	25.0	25.4
	12H	21.6	22.2	22.1	22.7	23.3	24.2	24.8	24.7	25.3	25.8
12H	4H	20.7	21.5	21.2	22.0	22.4	21.9	22.7	22.3	23.1	23.6
	6H	21.4	22.1	22.0	22.6	23.1	23.3	24.0	23.8	24.4	24.9
	8H	21.7	22.3	22.2	22.8	23.4	23.9	24.5	24.4	25.0	25.5

Maximum UGR = 25.8

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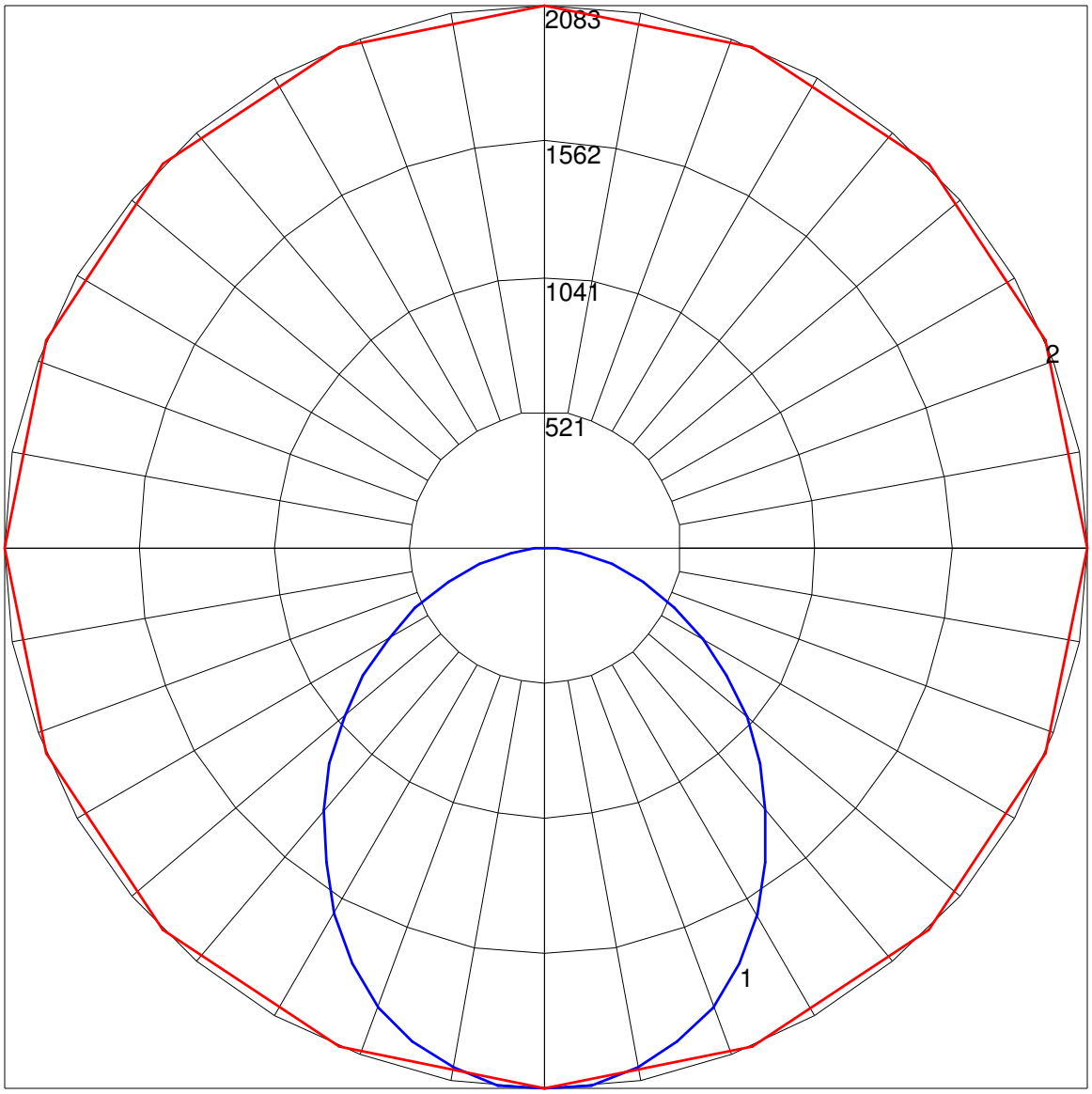
POLAR GRAPH



Maximum Candela = 2082.55 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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