H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-927-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-L61-927-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5130
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
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	4586	4518	4454
55	4121	4158	4273
65	3607	3934	4417
75	2811	3961	5120
85	1463	3687	4967

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2032.965	2032.965	2032.965	2032.965	2032.965
5	2032.965	2019.850	2011.418	2012.355	2010.481
10	1989.870	1979.565	1971.133	1967.386	1964.575
15	1919.607	1912.112	1902.743	1895.248	1893.375
20	1839.974	1827.795	1805.311	1800.627	1795.942
25	1723.805	1719.121	1692.889	1679.773	1671.341
30	1591.709	1584.214	1566.414	1545.803	1531.750
35	1442.750	1444.623	1422.139	1401.528	1393.097
40	1290.043	1294.727	1272.243	1258.190	1252.569
45	1143.894	1141.084	1127.031	1122.347	1111.105
50	988.377	991.188	978.072	989.314	979.946
55	833.797	842.229	841.292	864.713	864.713
60	682.027	687.648	712.006	743.859	757.912
65	537.752	551.805	586.468	632.374	658.606
70	391.603	415.962	474.046	533.068	564.921
75	256.697	299.792	361.624	430.014	467.488
80	135.843	184.560	253.886	321.340	356.003
85	44.969	74.948	113.359	138.654	152.707
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	727.53	N.A.	14.20
0-30	1508.48	N.A.	29.40
0-40	2397.96	N.A.	46.70
0-60	4031.21	N.A.	78.60
0-80	5003.25	N.A.	97.50
0-90	5129.64	N.A.	100.00
10-90	4938.49	N.A.	96.30
20-40	1670.43	N.A.	32.60
20-50	2542.88	N.A.	49.60
40-70	2221.56	N.A.	43.30
60-80	972.04	N.A.	18.90
70-80	383.73	N.A.	7.50
80-90	126.39	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	5129.64	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	191.15
10-20	536.38
20-30	780.96
30-40	889.48
40-50	872.45
50-60	760.80
60-70	588.30
70-80	383.73
80-90	126.39
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	54	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	16.7	18.3	17.1	18.6	18.9	17.1	18.7	17.4	19.0	19.3
	3H	18.3	19.8	18.7	20.1	20.5	19.3	20.8	19.7	21.1	21.5
	4H	18.9	20.3	19.3	20.6	21.0	20.4	21.8	20.8	22.1	22.5
	6H	19.2	20.5	19.7	20.9	21.3	21.4	22.7	21.8	23.1	23.5
	8H	19.4	20.6	19.8	21.0	21.4	21.8	23.0	22.2	23.4	23.8
	12H	19.4	20.6	19.8	21.0	21.4	22.1	23.2	22.5	23.6	24.1
4H	2H	17.4	18.7	17.8	19.1	19.5	17.7	19.1	18.1	19.4	19.8
	3H	19.2	20.4	19.7	20.8	21.2	20.2	21.3	20.6	21.7	22.1
	4H	20.0	21.0	20.4	21.4	21.9	21.4	22.5	21.9	22.9	23.3
	6H	20.5	21.4	20.9	21.9	22.3	22.6	23.6	23.1	24.0	24.5
	8H	20.6	21.5	21.1	21.9	22.4	23.1	24.0	23.5	24.4	24.9
	12H	20.7	21.5	21.2	22.0	22.4	23.4	24.2	23.9	24.7	25.1
8H	4H	20.5	21.4	20.9	21.8	22.3	21.7	22.6	22.2	23.1	23.5
	6H	21.2	21.9	21.7	22.4	22.9	23.1	23.9	23.6	24.3	24.8
	8H	21.4	22.0	21.9	22.5	23.0	23.7	24.3	24.2	24.9	25.3
	12H	21.5	22.1	22.0	22.6	23.2	24.1	24.7	24.6	25.2	25.7
12H	4H	20.6	21.4	21.1	21.9	22.3	21.8	22.6	22.2	23.0	23.5
	6H	21.3	22.0	21.9	22.5	23.0	23.2	23.9	23.7	24.3	24.8
	8H	21.6	22.2	22.1	22.7	23.3	23.8	24.4	24.3	24.9	25.4

Maximum UGR = 25.7

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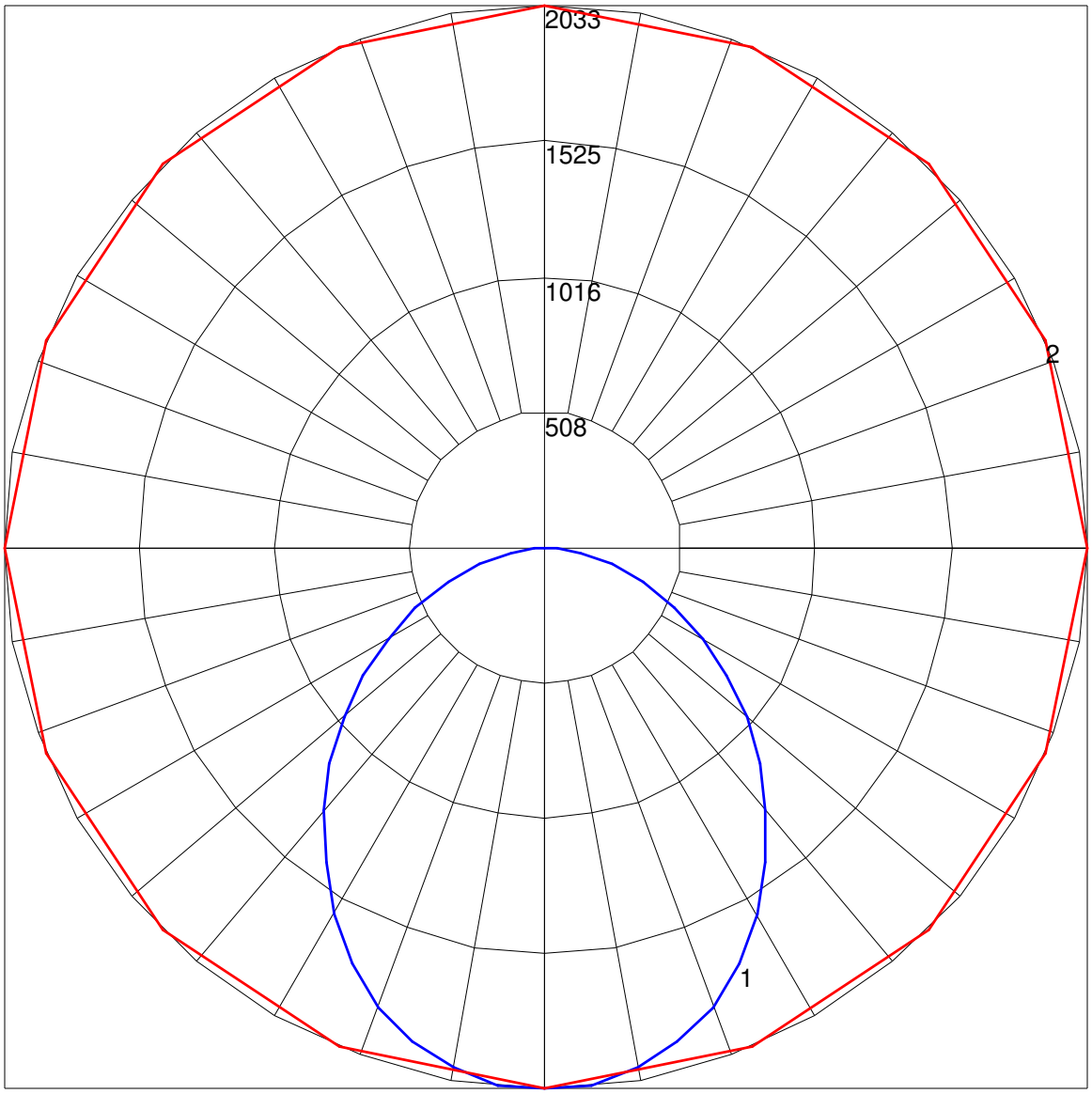
POLAR GRAPH



Maximum Candela = 2032.965 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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