H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-950-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-L52-950-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4942
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
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	4418	4353	4291
55	3970	4006	4117
65	3475	3790	4256
75	2709	3816	4933
85	1409	3552	4785

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1958.682	1958.682	1958.682	1958.682	1958.682
5	1958.682	1946.046	1937.922	1938.825	1937.019
10	1917.162	1907.233	1899.110	1895.499	1892.791
15	1849.465	1842.245	1833.218	1825.997	1824.192
20	1772.743	1761.009	1739.346	1734.833	1730.320
25	1660.818	1656.305	1631.032	1618.395	1610.272
30	1533.549	1526.328	1509.178	1489.321	1475.781
35	1390.033	1391.838	1370.175	1350.317	1342.194
40	1242.906	1247.419	1225.756	1212.217	1206.801
45	1102.097	1099.389	1085.850	1081.337	1070.506
50	952.263	954.970	942.334	953.165	944.139
55	803.331	811.454	810.551	833.117	833.117
60	657.106	662.522	685.990	716.679	730.218
65	518.103	531.642	565.039	609.268	634.541
70	377.295	400.763	456.725	513.590	544.279
75	247.317	288.838	348.411	414.302	450.407
80	130.880	177.816	244.610	309.598	342.995
85	43.326	72.209	109.217	133.588	147.127
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	700.94	N.A.	14.20
0-30	1453.36	N.A.	29.40
0-40	2310.34	N.A.	46.70
0-60	3883.91	N.A.	78.60
0-80	4820.43	N.A.	97.50
0-90	4942.2	N.A.	100.00
10-90	4758.04	N.A.	96.30
20-40	1609.39	N.A.	32.60
20-50	2449.96	N.A.	49.60
40-70	2140.38	N.A.	43.30
60-80	936.52	N.A.	18.90
70-80	369.71	N.A.	7.50
80-90	121.77	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	4942.2	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	184.16
10-20	516.78
20-30	752.42
30-40	856.97
40-50	840.57
50-60	733.00
60-70	566.81
70-80	369.71
80-90	121.77
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	16.6	18.2	17.0	18.5	18.8	17.0	18.6	17.3	18.9	19.2
	3H	18.2	19.7	18.6	20.0	20.4	19.2	20.7	19.6	21.0	21.4
	4H	18.8	20.2	19.2	20.5	20.9	20.3	21.7	20.7	22.0	22.4
	6H	19.2	20.4	19.6	20.8	21.2	21.3	22.6	21.7	23.0	23.4
	8H	19.3	20.5	19.7	20.9	21.3	21.7	22.9	22.1	23.3	23.7
	12H	19.3	20.5	19.7	20.9	21.3	22.0	23.1	22.4	23.5	24.0
4H	2H	17.3	18.6	17.7	19.0	19.4	17.6	19.0	18.0	19.3	19.7
	3H	19.1	20.3	19.6	20.7	21.1	20.1	21.3	20.5	21.6	22.0
	4H	19.9	20.9	20.3	21.3	21.8	21.3	22.4	21.8	22.8	23.2
	6H	20.4	21.3	20.8	21.8	22.2	22.5	23.5	23.0	23.9	24.4
	8H	20.5	21.4	21.0	21.8	22.3	23.0	23.9	23.5	24.3	24.8
	12H	20.6	21.4	21.1	21.9	22.3	23.3	24.1	23.8	24.6	25.0
8H	4H	20.4	21.3	20.8	21.7	22.2	21.6	22.5	22.1	23.0	23.4
	6H	21.1	21.8	21.6	22.3	22.8	23.0	23.8	23.5	24.2	24.7
	8H	21.3	21.9	21.8	22.4	22.9	23.6	24.2	24.1	24.8	25.2
	12H	21.4	22.0	21.9	22.5	23.1	24.0	24.6	24.5	25.1	25.6
12H	4H	20.5	21.3	21.0	21.8	22.2	21.7	22.5	22.1	22.9	23.4
	6H	21.2	21.9	21.8	22.4	22.9	23.1	23.8	23.6	24.2	24.7
	8H	21.5	22.1	22.0	22.6	23.2	23.7	24.3	24.2	24.8	25.3

Maximum UGR = 25.6

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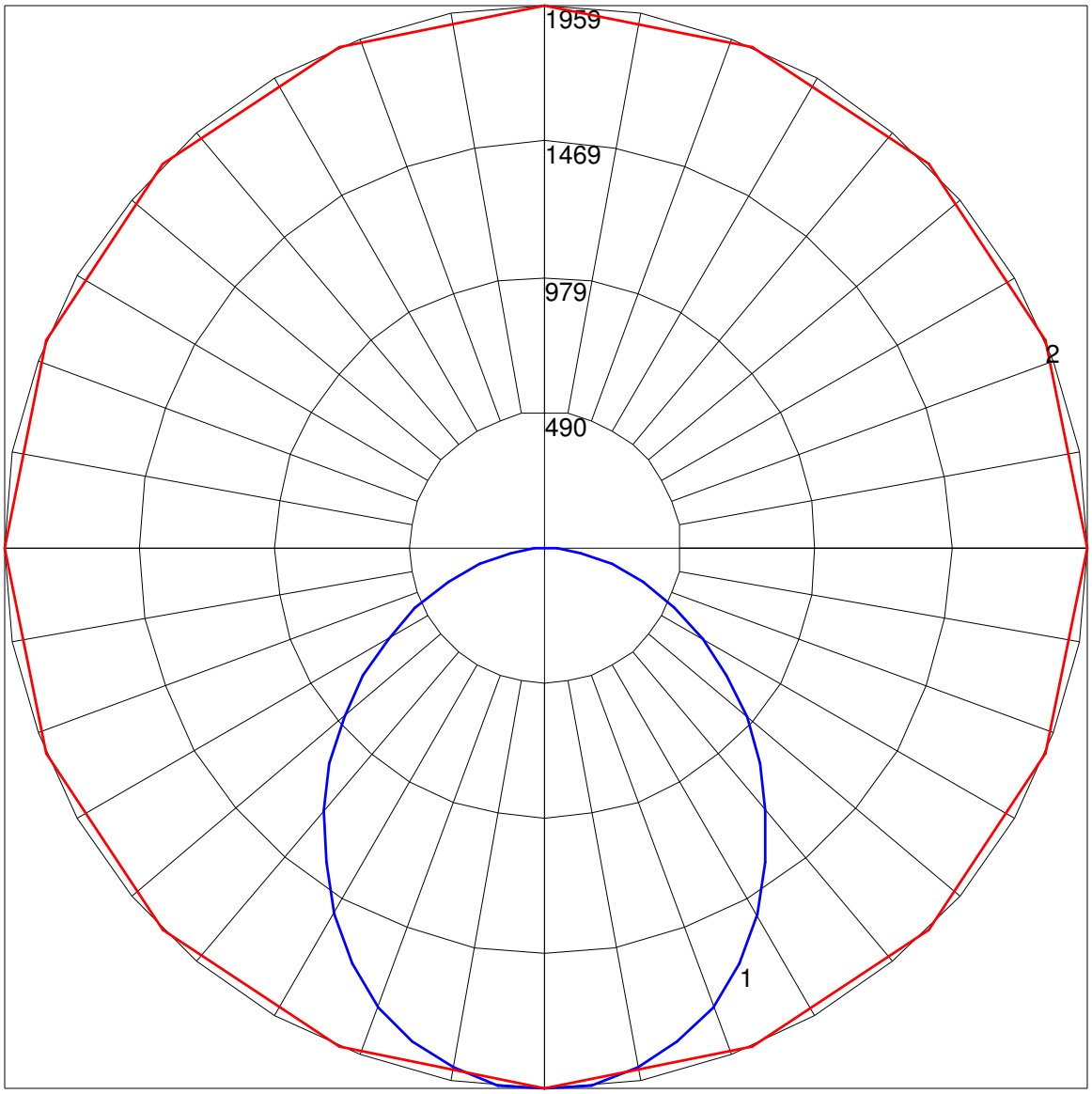
POLAR GRAPH



Maximum Candela = 1958.682 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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