H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-950-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-L43-950-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3888
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	121
Total Luminaire Watts	32.2
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	3476	3425	3376
55	3123	3151	3239
65	2734	2982	3348
75	2131	3002	3881
85	1109	2795	3765

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1540.933	1540.933	1540.933	1540.933	1540.933
5	1540.933	1530.992	1524.601	1525.311	1523.890
10	1508.268	1500.457	1494.066	1491.226	1489.095
15	1455.010	1449.329	1442.228	1436.547	1435.127
20	1394.651	1385.420	1368.377	1364.826	1361.276
25	1306.598	1303.047	1283.164	1273.223	1266.832
30	1206.472	1200.792	1187.300	1171.677	1161.026
35	1093.565	1094.986	1077.943	1062.321	1055.930
40	977.818	981.368	964.326	953.674	949.414
45	867.041	864.911	854.259	850.709	842.187
50	749.163	751.294	741.352	749.873	742.772
55	631.996	638.387	637.676	655.429	655.429
60	516.958	521.219	539.682	563.825	574.477
65	407.602	418.253	444.527	479.322	499.205
70	296.825	315.288	359.314	404.051	428.195
75	194.569	227.234	274.101	325.939	354.344
80	102.966	139.891	192.439	243.567	269.841
85	34.085	56.809	85.923	105.096	115.748
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	551.45	N.A.	14.20
0-30	1143.39	N.A.	29.40
0-40	1817.59	N.A.	46.70
0-60	3055.55	N.A.	78.60
0-80	3792.33	N.A.	97.50
0-90	3888.13	N.A.	100.00
10-90	3743.24	N.A.	96.30
20-40	1266.14	N.A.	32.60
20-50	1927.43	N.A.	49.60
40-70	1683.88	N.A.	43.30
60-80	736.78	N.A.	18.90
70-80	290.86	N.A.	7.50
80-90	95.80	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	3888.13	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	144.89
10-20	406.56
20-30	591.94
30-40	674.20
40-50	661.29
50-60	576.67
60-70	445.92
70-80	290.86
80-90	95.80
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	15.7	17.3	16.1	17.6	17.9	16.1	17.7	16.4	18.0	18.3
	3H	17.3	18.8	17.7	19.1	19.5	18.3	19.8	18.7	20.1	20.5
	4H	17.9	19.3	18.3	19.6	20.0	19.4	20.8	19.8	21.1	21.5
	6H	18.3	19.5	18.7	19.9	20.3	20.4	21.7	20.8	22.1	22.5
	8H	18.4	19.6	18.8	20.0	20.4	20.8	22.0	21.2	22.4	22.8
	12H	18.4	19.6	18.8	20.0	20.4	21.1	22.2	21.5	22.6	23.1
4H	2H	16.4	17.7	16.8	18.1	18.5	16.7	18.1	17.1	18.4	18.8
	3H	18.2	19.4	18.7	19.8	20.2	19.2	20.4	19.6	20.7	21.1
	4H	19.0	20.0	19.4	20.4	20.9	20.4	21.5	20.9	21.9	22.3
	6H	19.5	20.4	19.9	20.9	21.3	21.6	22.6	22.1	23.0	23.5
	8H	19.6	20.5	20.1	20.9	21.4	22.1	23.0	22.6	23.4	23.9
	12H	19.7	20.5	20.2	21.0	21.4	22.4	23.2	22.9	23.7	24.1
8H	4H	19.5	20.4	19.9	20.8	21.3	20.7	21.6	21.2	22.1	22.5
	6H	20.2	20.9	20.7	21.4	21.9	22.1	22.9	22.6	23.3	23.8
	8H	20.4	21.0	20.9	21.5	22.0	22.7	23.3	23.2	23.9	24.3
	12H	20.5	21.1	21.0	21.6	22.2	23.1	23.7	23.6	24.2	24.7
12H	4H	19.6	20.4	20.1	20.9	21.3	20.8	21.6	21.2	22.0	22.5
	6H	20.3	21.0	20.9	21.5	22.0	22.2	22.9	22.7	23.3	23.8
	8H	20.6	21.2	21.1	21.7	22.3	22.8	23.4	23.3	23.9	24.4

Maximum UGR = 24.7

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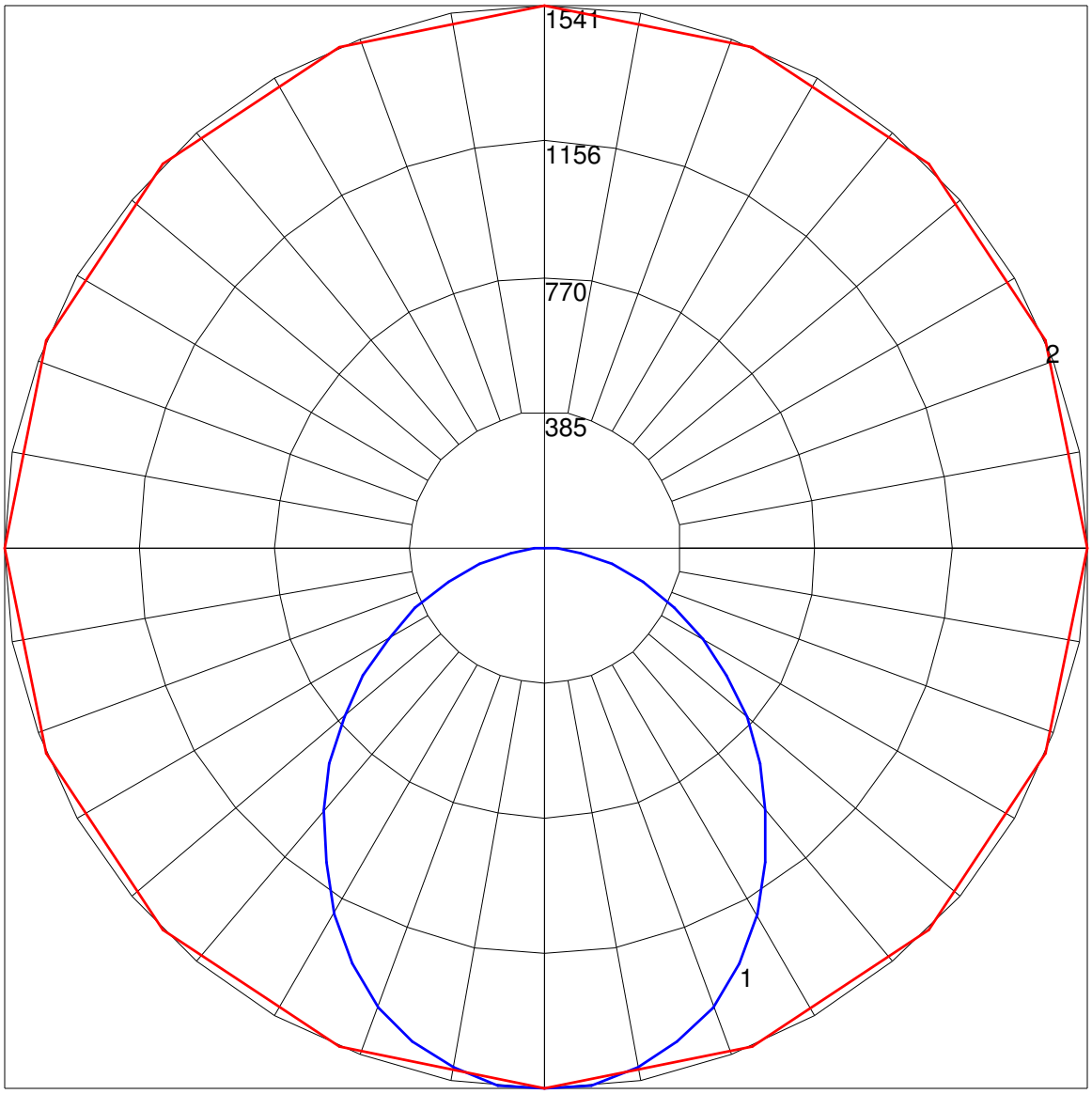
POLAR GRAPH



Maximum Candela = 1540.933 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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