H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L49-927-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20790.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2 X 4 RECESSED LED LUMINAIRE WITH
[MORE] FROST SQUARED RIBBED LENS
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L49-927-SA-DIM-UNV
[LAMPCAT] 22 INCH LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR
[_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4289
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	36.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3832	3713	3686
55	3449	3469	3546
65	3013	3334	3653
75	2433	3367	4201
85	1127	3634	4391

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1670.279	1670.279	1670.279	1670.279	1670.279
5	1678.577	1660.137	1650.916	1627.865	1649.072
10	1646.306	1626.482	1614.496	1612.190	1615.418
15	1591.906	1572.543	1561.939	1558.251	1555.485
20	1519.525	1500.623	1483.105	1474.345	1475.728
25	1429.165	1413.490	1406.114	1383.063	1374.304
30	1323.591	1307.456	1290.859	1278.411	1271.496
35	1213.868	1199.116	1179.292	1162.234	1152.553
40	1088.010	1076.023	1055.277	1041.907	1034.070
45	966.300	952.469	936.334	928.957	929.418
50	837.675	833.526	816.007	819.234	823.384
55	705.362	705.362	709.511	720.576	725.186
60	582.270	585.036	603.938	622.839	634.365
65	454.106	470.702	502.513	535.245	550.459
70	331.013	358.674	404.315	448.112	466.092
75	224.517	253.101	310.728	367.434	387.719
80	117.560	166.429	226.361	286.294	305.196
85	35.038	78.835	112.950	128.164	136.462
90	0.000	1.383	1.844	3.227	1.844

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	597.65	N.A.	13.90
0-30	1241.77	N.A.	29.00
0-40	1979.81	N.A.	46.20
0-60	3345.9	N.A.	78.00
0-80	4172.75	N.A.	97.30
0-90	4289.07	N.A.	100.00
10-90	4132.33	N.A.	96.30
20-40	1382.16	N.A.	32.20
20-50	2109.36	N.A.	49.20
40-70	1864.56	N.A.	43.50
60-80	826.85	N.A.	19.30
70-80	328.38	N.A.	7.70
80-90	116.33	N.A.	2.70
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	4289.07	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	156.74
10-20	440.91
20-30	644.12
30-40	738.04
40-50	727.20
50-60	638.89
60-70	498.47
70-80	328.38
80-90	116.33
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	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	83	70	62	55	80	69	61	55	67	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	54	47	60	52	47	58	51	46	56	50	46	44
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	64	51	43	37	49	42	36	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	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	16.1	17.7	16.5	18.1	18.4	16.4	18.0	16.8	18.4	18.7
	3H	17.8	19.2	18.1	19.6	19.9	18.7	20.2	19.1	20.5	20.8
	4H	18.4	19.7	18.8	20.1	20.5	19.8	21.2	20.2	21.5	21.9
	6H	18.7	20.0	19.2	20.4	20.8	20.8	22.1	21.2	22.5	22.9
	8H	18.8	20.1	19.3	20.5	20.9	21.2	22.5	21.6	22.9	23.3
	12H	18.9	20.1	19.3	20.5	20.9	21.5	22.7	21.9	23.1	23.5
4H	2H	16.8	18.2	17.2	18.6	18.9	17.1	18.4	17.5	18.8	19.2
	3H	18.7	19.9	19.1	20.3	20.7	19.6	20.7	20.0	21.1	21.5
	4H	19.5	20.5	19.9	20.9	21.4	20.8	21.9	21.3	22.3	22.7
	6H	20.0	20.9	20.5	21.4	21.8	22.1	23.0	22.5	23.5	23.9
	8H	20.2	21.0	20.6	21.5	21.9	22.6	23.5	23.0	23.9	24.4
	12H	20.2	21.0	20.7	21.5	22.0	22.9	23.7	23.4	24.2	24.7
8H	4H	20.0	20.9	20.4	21.3	21.8	21.2	22.0	21.6	22.5	22.9
	6H	20.7	21.4	21.2	21.9	22.4	22.6	23.4	23.1	23.8	24.3
	8H	21.0	21.6	21.5	22.1	22.6	23.2	23.9	23.7	24.4	24.9
	12H	21.1	21.7	21.6	22.2	22.8	23.7	24.3	24.2	24.8	25.3
12H	4H	20.1	20.9	20.6	21.4	21.8	21.2	22.0	21.7	22.5	22.9
	6H	20.9	21.6	21.4	22.0	22.6	22.7	23.4	23.2	23.8	24.4
	8H	21.2	21.8	21.8	22.3	22.9	23.4	23.9	23.9	24.4	25.0

Maximum UGR = 25.3

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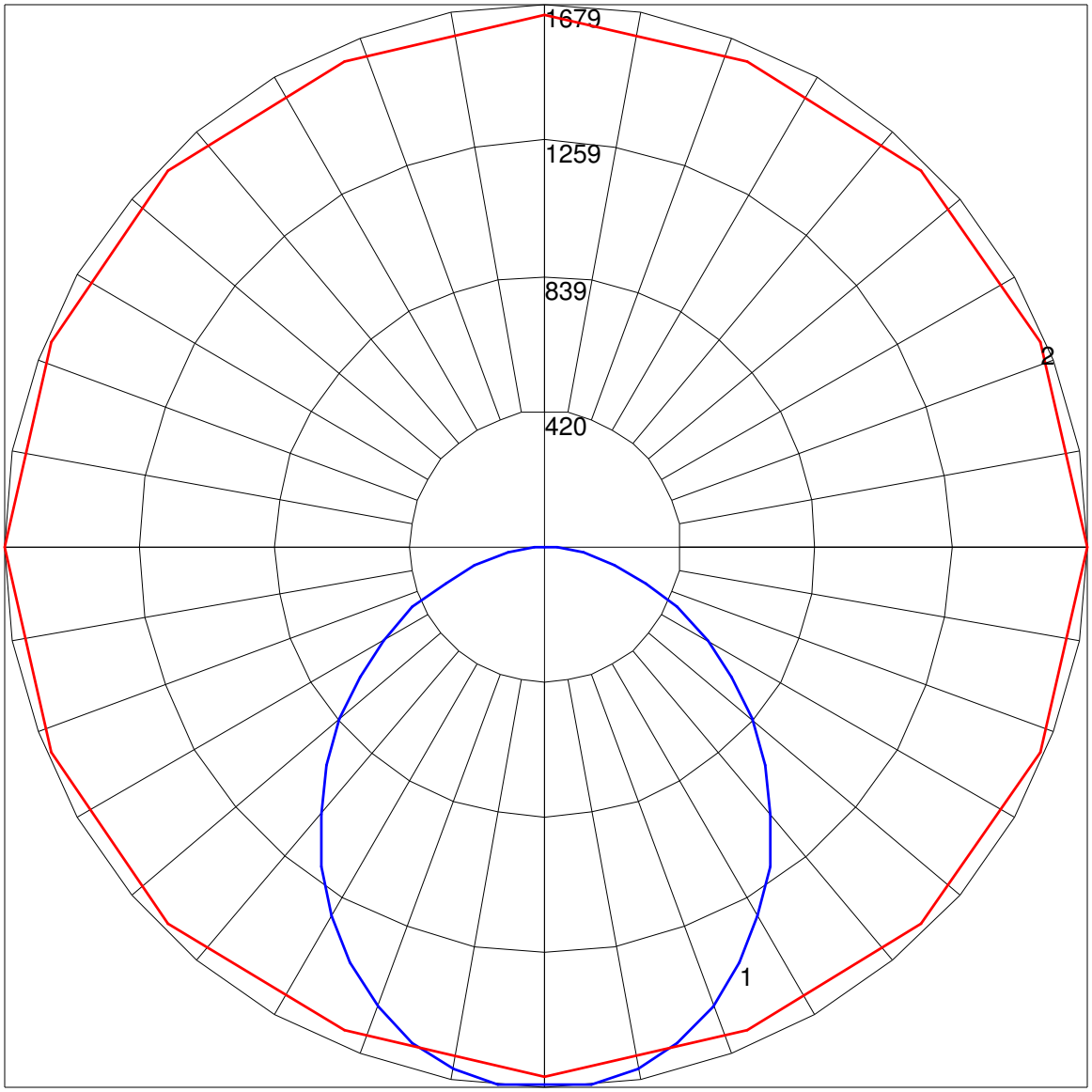
POLAR GRAPH



Maximum Candela = 1678.577 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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