H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-827-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19235.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/RIBBED FROSTED ACRYLIC CENTER DIFFUSER
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L38-827-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Architectural, Office, Direct
[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3669
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	28.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1573	1660	1745
55	1410	1543	1667
65	1239	1469	1669
75	959	1473	1824
85	579	1933	2215

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1403.503	1403.503	1403.503	1403.503	1403.503
5	1382.072	1380.167	1380.167	1375.405	1373.024
10	1377.786	1377.786	1380.167	1382.072	1382.072
15	1341.591	1343.496	1345.877	1349.211	1351.592
20	1253.009	1257.772	1263.486	1271.106	1273.488
25	1182.048	1186.334	1197.764	1207.765	1212.528
30	1035.840	1003.931	1134.423	1096.800	1091.085
35	955.354	964.403	985.834	1003.931	1011.075
40	850.103	861.533	885.345	909.158	918.207
45	776.761	786.762	819.623	850.103	861.533
50	674.844	690.560	726.755	758.663	769.617
55	564.830	581.975	618.170	654.365	667.700
60	460.532	478.629	519.587	556.734	570.545
65	365.759	389.571	433.386	476.724	492.441
70	269.556	297.655	349.566	395.286	411.002
75	173.354	208.120	266.223	312.419	329.564
80	95.250	140.493	207.168	252.412	266.223
85	35.242	80.486	117.633	132.397	134.778
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	508.77	N.A.	13.90
0-30	1054.42	N.A.	28.70
0-40	1669.51	N.A.	45.50
0-60	2851.17	N.A.	77.70
0-80	3558.92	N.A.	97.00
0-90	3668.63	N.A.	100.00
10-90	3536.7	N.A.	96.40
20-40	1160.75	N.A.	31.60
20-50	1788.13	N.A.	48.70
40-70	1609.52	N.A.	43.90
60-80	707.75	N.A.	19.30
70-80	279.88	N.A.	7.60
80-90	109.71	N.A.	3.00
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	3668.63	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	131.93
10-20	376.84
20-30	545.65
30-40	615.10
40-50	627.38
50-60	554.27
60-70	427.87
70-80	279.88
80-90	109.71
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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	52	43	37	63	51	42	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	33	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	12.8	14.5	13.2	14.8	15.1	13.9	15.5	14.2	15.8	16.1
	3H	14.5	16.0	14.9	16.3	16.7	16.0	17.5	16.4	17.9	18.2
	4H	15.1	16.5	15.5	16.8	17.2	17.0	18.4	17.4	18.8	19.2
	6H	15.4	16.8	15.9	17.1	17.5	18.1	19.4	18.5	19.7	20.1
	8H	15.6	16.8	16.0	17.2	17.6	18.5	19.7	18.9	20.1	20.5
	12H	15.6	16.8	16.1	17.2	17.6	18.8	20.0	19.3	20.4	20.8
4H	2H	13.6	15.0	14.0	15.4	15.8	14.4	15.8	14.8	16.2	16.5
	3H	15.5	16.7	16.0	17.1	17.5	16.9	18.1	17.3	18.5	18.9
	4H	16.2	17.3	16.7	17.7	18.2	18.0	19.1	18.5	19.5	20.0
	6H	16.8	17.7	17.2	18.2	18.6	19.3	20.2	19.7	20.7	21.1
	8H	16.9	17.8	17.4	18.3	18.7	19.8	20.7	20.3	21.1	21.6
	12H	17.1	17.9	17.6	18.3	18.8	20.2	21.0	20.7	21.5	22.0
8H	4H	16.8	17.7	17.3	18.2	18.6	18.4	19.3	18.8	19.7	20.2
	6H	17.6	18.3	18.1	18.8	19.3	19.8	20.6	20.3	21.1	21.5
	8H	17.9	18.5	18.4	19.0	19.5	20.5	21.2	21.0	21.7	22.1
	12H	18.1	18.7	18.6	19.2	19.7	21.1	21.6	21.6	22.1	22.7
12H	4H	17.0	17.8	17.5	18.3	18.7	18.4	19.2	18.9	19.7	20.2
	6H	17.8	18.5	18.4	19.0	19.5	19.9	20.6	20.5	21.1	21.6
	8H	18.2	18.8	18.7	19.3	19.9	20.7	21.2	21.2	21.7	22.3

Maximum UGR = 22.7

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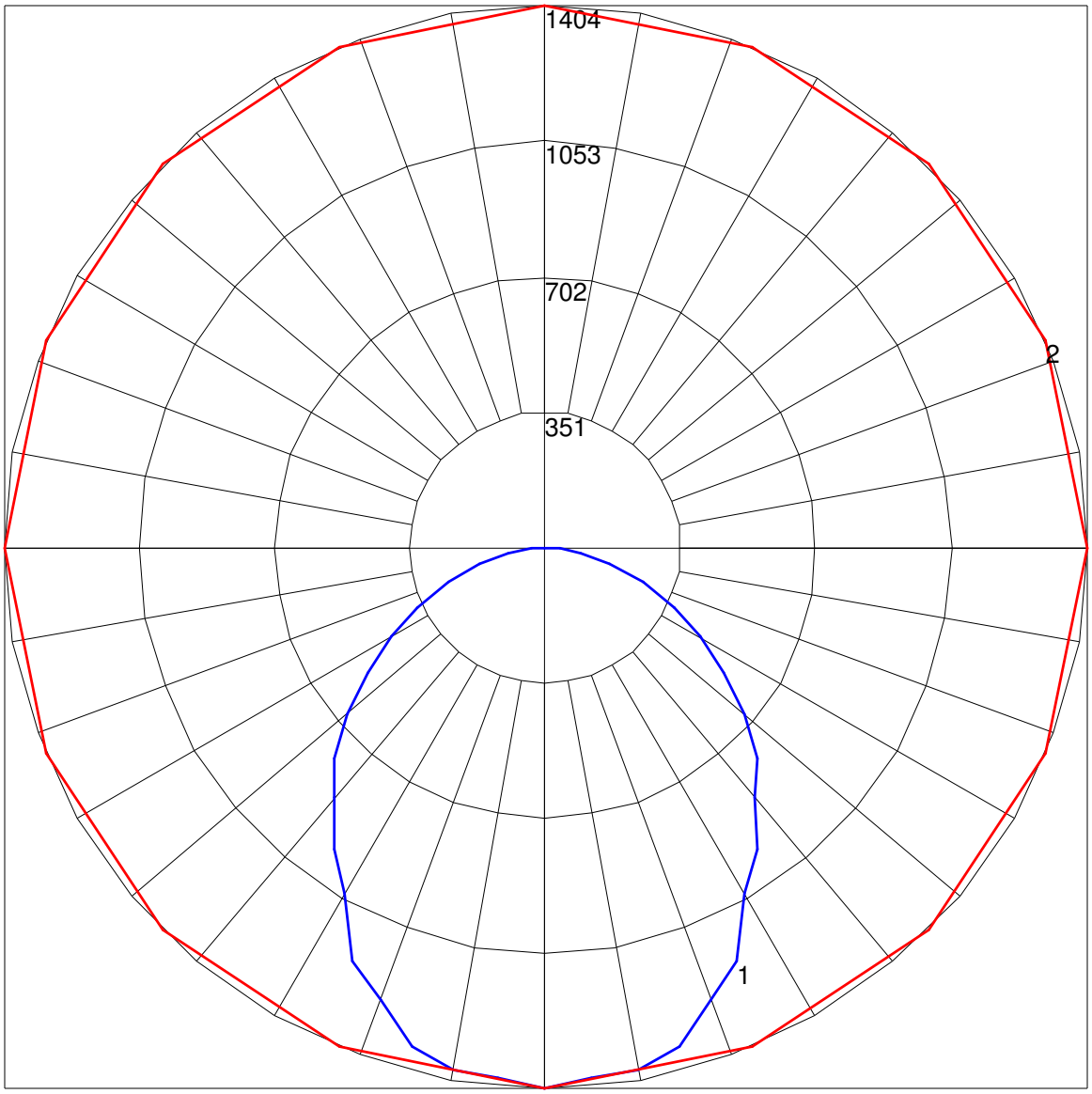
POLAR GRAPH



Maximum Candela = 1403.503 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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