H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-930-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-L38-930-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	3139
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	110
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	1346	1420	1493
55	1207	1321	1427
65	1061	1257	1428
75	821	1261	1560
85	496	1654	1895

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1200.936	1200.936	1200.936	1200.936	1200.936
5	1182.598	1180.968	1180.968	1176.893	1174.855
10	1178.931	1178.931	1180.968	1182.598	1182.598
15	1147.960	1149.590	1151.627	1154.480	1156.517
20	1072.163	1076.238	1081.128	1087.648	1089.686
25	1011.443	1015.111	1024.891	1033.449	1037.524
30	886.337	859.034	970.692	938.499	933.609
35	817.468	825.211	843.549	859.034	865.147
40	727.408	737.188	757.564	777.939	785.682
45	664.651	673.209	701.327	727.408	737.188
50	577.444	590.892	621.862	649.166	658.538
55	483.309	497.979	528.950	559.921	571.331
60	394.064	409.549	444.595	476.381	488.199
65	312.969	333.344	370.835	407.919	421.367
70	230.651	254.695	299.113	338.234	351.682
75	148.334	178.082	227.799	267.327	281.998
80	81.502	120.216	177.267	215.981	227.799
85	30.156	68.869	100.655	113.288	115.326
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	435.34	N.A.	13.90
0-30	902.23	N.A.	28.70
0-40	1428.55	N.A.	45.50
0-60	2439.66	N.A.	77.70
0-80	3045.26	N.A.	97.00
0-90	3139.14	N.A.	100.00
10-90	3026.25	N.A.	96.40
20-40	993.22	N.A.	31.60
20-50	1530.05	N.A.	48.70
40-70	1377.22	N.A.	43.90
60-80	605.60	N.A.	19.30
70-80	239.49	N.A.	7.60
80-90	93.88	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	3139.14	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	112.89
10-20	322.45
20-30	466.90
30-40	526.32
40-50	536.83
50-60	474.28
60-70	366.12
70-80	239.49
80-90	93.88
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	12.4	14.0	12.7	14.3	14.6	13.4	15.0	13.7	15.3	15.6
	3H	14.0	15.5	14.4	15.8	16.2	15.5	17.0	15.9	17.4	17.7
	4H	14.6	16.0	15.0	16.3	16.7	16.5	17.9	16.9	18.3	18.7
	6H	14.9	16.3	15.4	16.6	17.0	17.6	18.9	18.0	19.2	19.6
	8H	15.1	16.3	15.5	16.7	17.1	18.0	19.2	18.4	19.6	20.0
	12H	15.1	16.3	15.6	16.7	17.1	18.3	19.5	18.8	19.9	20.3
4H	2H	13.1	14.5	13.5	14.9	15.3	13.9	15.3	14.3	15.7	16.0
	3H	15.0	16.2	15.5	16.6	17.0	16.4	17.6	16.8	18.0	18.4
	4H	15.7	16.8	16.2	17.2	17.7	17.5	18.6	18.0	19.0	19.5
	6H	16.3	17.2	16.7	17.7	18.1	18.8	19.7	19.2	20.2	20.6
	8H	16.4	17.3	16.9	17.8	18.2	19.3	20.2	19.8	20.6	21.1
	12H	16.6	17.4	17.1	17.8	18.3	19.7	20.5	20.2	21.0	21.5
8H	4H	16.3	17.2	16.8	17.7	18.1	17.9	18.8	18.3	19.2	19.7
	6H	17.1	17.8	17.6	18.3	18.8	19.3	20.1	19.8	20.6	21.0
	8H	17.4	18.0	17.9	18.5	19.0	20.0	20.7	20.5	21.2	21.6
	12H	17.6	18.2	18.1	18.7	19.2	20.6	21.1	21.1	21.6	22.2
12H	4H	16.5	17.3	17.0	17.8	18.2	17.9	18.7	18.4	19.2	19.7
	6H	17.3	18.0	17.9	18.5	19.0	19.4	20.1	20.0	20.6	21.1
	8H	17.7	18.3	18.2	18.8	19.4	20.2	20.7	20.7	21.2	21.8

Maximum UGR = 22.2

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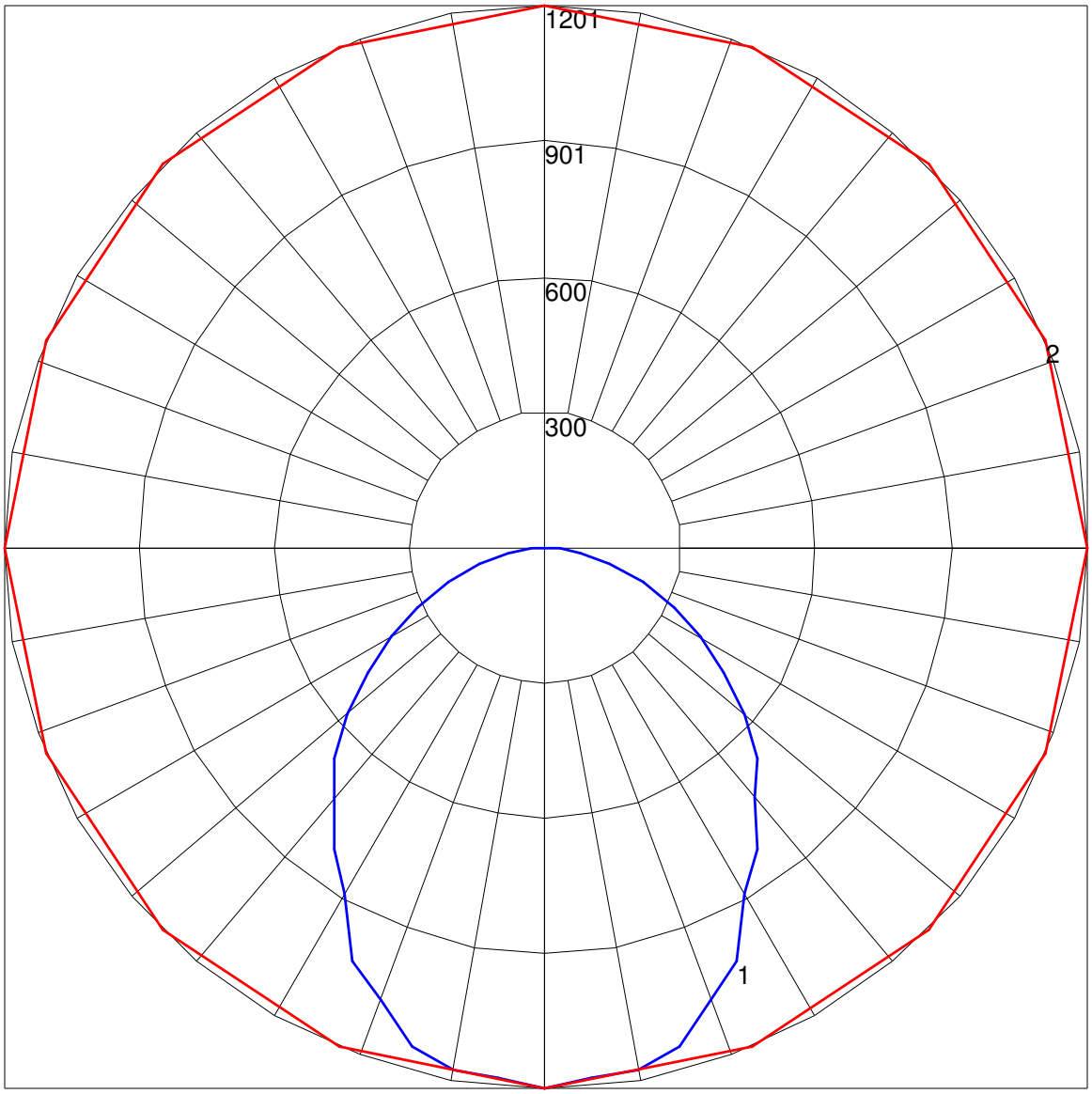
POLAR GRAPH



Maximum Candela = 1200.936 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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