H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-940-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-L38-940-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	3253
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
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	1395	1472	1547
55	1250	1368	1478
65	1099	1302	1480
75	850	1306	1617
85	513	1714	1964

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1244.343	1244.343	1244.343	1244.343	1244.343
5	1225.343	1223.654	1223.654	1219.431	1217.320
10	1221.542	1221.542	1223.654	1225.343	1225.343
15	1189.452	1191.141	1193.252	1196.208	1198.319
20	1110.915	1115.138	1120.205	1126.960	1129.072
25	1048.001	1051.802	1061.935	1070.802	1075.025
30	918.374	890.083	1005.777	972.420	967.353
35	847.015	855.037	874.038	890.083	896.417
40	753.700	763.833	784.945	806.058	814.080
45	688.675	697.542	726.676	753.700	763.833
50	598.315	612.249	644.339	672.629	682.341
55	500.777	515.978	548.068	580.159	591.981
60	408.307	424.352	460.665	493.599	505.844
65	324.281	345.393	384.239	422.663	436.597
70	238.988	263.900	309.925	350.460	364.394
75	153.696	184.519	236.033	276.990	292.191
80	84.448	124.561	183.675	223.788	236.033
85	31.246	71.359	104.293	117.383	119.494
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	451.07	N.A.	13.90
0-30	934.84	N.A.	28.70
0-40	1480.19	N.A.	45.50
0-60	2527.84	N.A.	77.70
0-80	3155.33	N.A.	97.00
0-90	3252.6	N.A.	100.00
10-90	3135.63	N.A.	96.40
20-40	1029.11	N.A.	31.60
20-50	1585.35	N.A.	48.70
40-70	1427.00	N.A.	43.90
60-80	627.49	N.A.	19.30
70-80	248.14	N.A.	7.60
80-90	97.27	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	3252.6	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	116.97
10-20	334.10
20-30	483.77
30-40	545.34
40-50	556.23
50-60	491.42
60-70	379.35
70-80	248.14
80-90	97.27
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	14.1	12.8	14.4	14.7	13.5	15.1	13.8	15.4	15.7
	3H	14.1	15.6	14.5	15.9	16.3	15.6	17.1	16.0	17.5	17.8
	4H	14.7	16.1	15.1	16.4	16.8	16.6	18.0	17.0	18.4	18.8
	6H	15.0	16.4	15.5	16.7	17.1	17.7	19.0	18.1	19.3	19.7
	8H	15.2	16.4	15.6	16.8	17.2	18.1	19.3	18.5	19.7	20.1
	12H	15.2	16.4	15.7	16.8	17.2	18.4	19.6	18.9	20.0	20.4
4H	2H	13.2	14.6	13.6	15.0	15.4	14.0	15.4	14.4	15.8	16.1
	3H	15.1	16.3	15.6	16.7	17.1	16.5	17.7	16.9	18.1	18.4
	4H	15.8	16.9	16.3	17.3	17.8	17.6	18.7	18.1	19.1	19.6
	6H	16.4	17.3	16.8	17.8	18.2	18.9	19.8	19.3	20.3	20.7
	8H	16.5	17.4	17.0	17.9	18.3	19.4	20.3	19.9	20.7	21.2
	12H	16.7	17.5	17.2	17.9	18.4	19.8	20.6	20.3	21.1	21.6
8H	4H	16.4	17.3	16.9	17.8	18.2	18.0	18.9	18.4	19.3	19.8
	6H	17.2	17.9	17.7	18.4	18.9	19.4	20.2	19.9	20.7	21.1
	8H	17.5	18.1	18.0	18.6	19.1	20.1	20.8	20.6	21.3	21.7
	12H	17.7	18.3	18.2	18.8	19.3	20.7	21.2	21.2	21.7	22.3
12H	4H	16.6	17.4	17.1	17.9	18.3	18.0	18.8	18.5	19.3	19.8
	6H	17.4	18.1	18.0	18.6	19.1	19.5	20.2	20.1	20.7	21.2
	8H	17.8	18.4	18.3	18.9	19.5	20.3	20.8	20.8	21.3	21.9

Maximum UGR = 22.3

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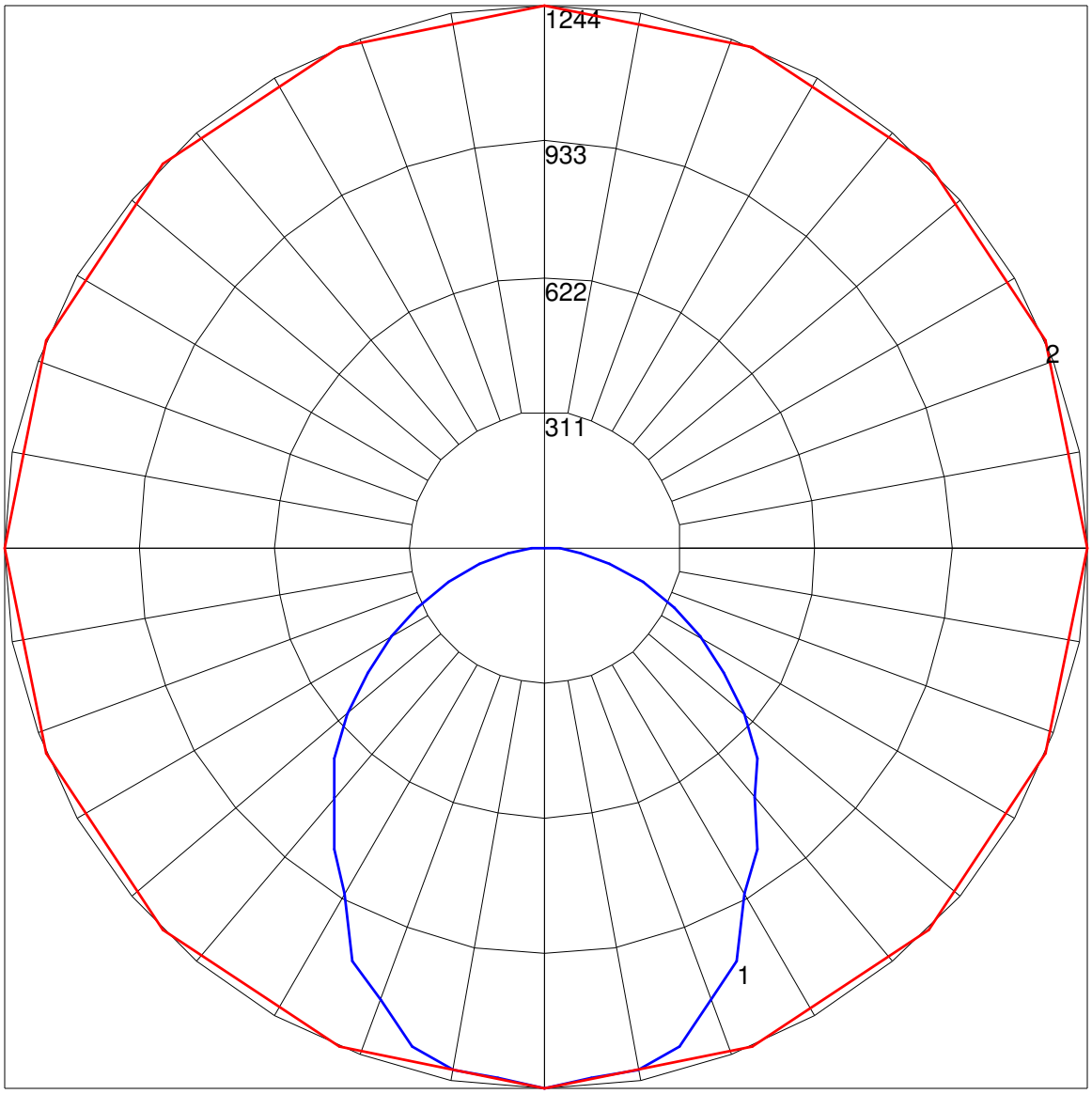
POLAR GRAPH



Maximum Candela = 1244.343 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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