H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-940-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-L38-940-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	3350
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	28.5
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	2993	2901	2879
55	2694	2710	2769
65	2354	2605	2853
75	1900	2630	3281
85	881	2839	3430

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1304.676	1304.676	1304.676	1304.676	1304.676
5	1311.158	1296.753	1289.551	1271.546	1288.111
10	1285.950	1270.465	1261.102	1259.302	1261.823
15	1243.457	1228.333	1220.050	1217.169	1215.008
20	1186.920	1172.155	1158.471	1151.629	1152.710
25	1116.339	1104.095	1098.333	1080.328	1073.486
30	1033.874	1021.270	1008.306	998.583	993.181
35	948.168	936.644	921.159	907.835	900.273
40	849.858	840.495	824.290	813.847	807.725
45	754.789	743.986	731.382	725.620	725.980
50	654.318	651.077	637.393	639.914	643.155
55	550.967	550.967	554.208	562.851	566.452
60	454.818	456.979	471.743	486.508	495.510
65	354.708	367.672	392.519	418.087	429.970
70	258.558	280.165	315.816	350.026	364.070
75	175.373	197.700	242.714	287.007	302.852
80	91.828	129.999	176.814	223.628	238.392
85	27.368	61.579	88.227	100.110	106.592
90	0.000	1.080	1.440	2.521	1.440

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	466.83	N.A.	13.90
0-30	969.96	N.A.	29.00
0-40	1546.45	N.A.	46.20
0-60	2613.52	N.A.	78.00
0-80	3259.38	N.A.	97.30
0-90	3350.25	N.A.	100.00
10-90	3227.82	N.A.	96.30
20-40	1079.62	N.A.	32.20
20-50	1647.65	N.A.	49.20
40-70	1456.43	N.A.	43.50
60-80	645.86	N.A.	19.30
70-80	256.50	N.A.	7.70
80-90	90.86	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	3350.25	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	122.43
10-20	344.40
20-30	503.13
30-40	576.49
40-50	568.03
50-60	499.05
60-70	389.36
70-80	256.50
80-90	90.86
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	104	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	37	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	15.2	16.8	15.6	17.2	17.5	15.5	17.1	15.9	17.5	17.8
	3H	16.9	18.3	17.2	18.7	19.0	17.8	19.3	18.2	19.6	19.9
	4H	17.5	18.8	17.9	19.2	19.6	18.9	20.3	19.3	20.6	21.0
	6H	17.8	19.1	18.3	19.5	19.9	19.9	21.2	20.3	21.6	22.0
	8H	17.9	19.2	18.4	19.6	20.0	20.3	21.6	20.7	22.0	22.4
	12H	18.0	19.2	18.4	19.6	20.0	20.6	21.8	21.0	22.2	22.6
4H	2H	15.9	17.3	16.3	17.7	18.0	16.2	17.5	16.6	17.9	18.3
	3H	17.8	19.0	18.2	19.4	19.8	18.7	19.8	19.1	20.2	20.6
	4H	18.6	19.6	19.0	20.0	20.5	19.9	21.0	20.4	21.4	21.8
	6H	19.1	20.0	19.6	20.5	20.9	21.2	22.1	21.6	22.6	23.0
	8H	19.3	20.1	19.7	20.6	21.0	21.7	22.6	22.1	23.0	23.5
	12H	19.3	20.1	19.8	20.6	21.1	22.0	22.8	22.5	23.3	23.8
8H	4H	19.1	20.0	19.5	20.4	20.9	20.3	21.1	20.7	21.6	22.0
	6H	19.8	20.5	20.3	21.0	21.5	21.7	22.5	22.2	22.9	23.4
	8H	20.1	20.7	20.6	21.2	21.7	22.3	23.0	22.8	23.5	24.0
	12H	20.2	20.8	20.7	21.3	21.9	22.8	23.4	23.3	23.9	24.4
12H	4H	19.2	20.0	19.7	20.5	20.9	20.3	21.1	20.8	21.6	22.0
	6H	20.0	20.7	20.5	21.1	21.7	21.8	22.5	22.3	22.9	23.5
	8H	20.3	20.9	20.9	21.4	22.0	22.5	23.0	23.0	23.5	24.1

Maximum UGR = 24.4

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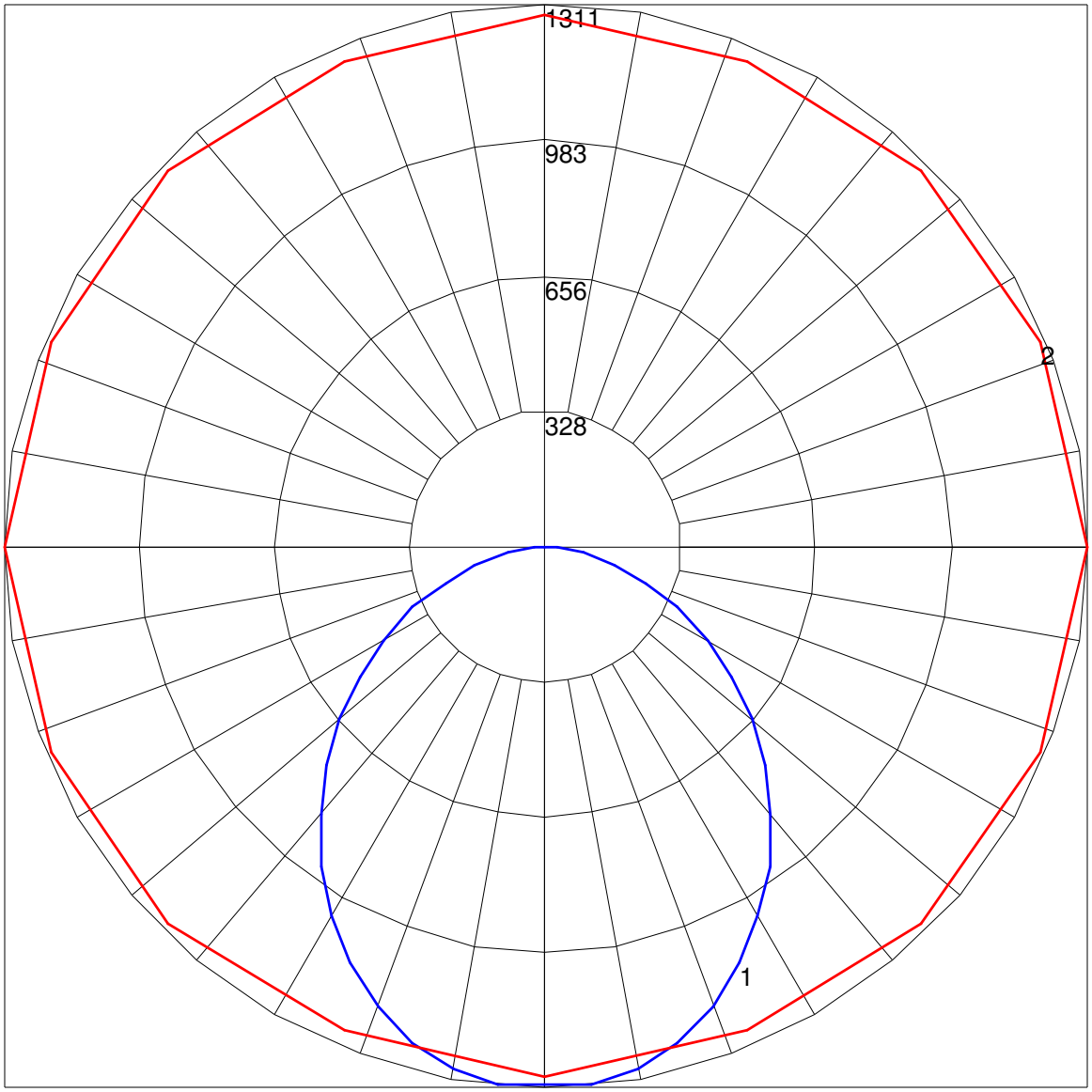
POLAR GRAPH



Maximum Candela = 1311.158 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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