H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-927-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-L38-927-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	3194
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
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	2854	2766	2745
55	2568	2584	2641
65	2244	2483	2720
75	1812	2508	3129
85	840	2707	3270

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1243.993	1243.993	1243.993	1243.993	1243.993
5	1250.173	1236.439	1229.572	1212.404	1228.198
10	1226.138	1211.374	1202.446	1200.730	1203.133
15	1185.622	1171.201	1163.303	1160.556	1158.496
20	1131.714	1117.636	1104.589	1098.065	1099.095
25	1064.416	1052.741	1047.248	1030.080	1023.556
30	985.786	973.769	961.408	952.137	946.987
35	904.067	893.079	878.315	865.610	858.400
40	810.329	801.402	785.951	775.993	770.156
45	719.682	709.382	697.364	691.870	692.214
50	623.885	620.795	607.747	610.151	613.241
55	525.341	525.341	528.431	536.672	540.105
60	433.664	435.724	449.801	463.879	472.463
65	338.209	350.570	374.262	398.641	409.972
70	246.532	267.134	301.127	333.746	347.137
75	167.216	188.505	231.425	273.658	288.766
80	87.557	123.953	168.590	213.226	227.304
85	26.095	58.715	84.123	95.454	101.635
90	0.000	1.030	1.373	2.404	1.373

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	445.12	N.A.	13.90
0-30	924.85	N.A.	29.00
0-40	1474.52	N.A.	46.20
0-60	2491.97	N.A.	78.00
0-80	3107.78	N.A.	97.30
0-90	3194.42	N.A.	100.00
10-90	3077.68	N.A.	96.30
20-40	1029.41	N.A.	32.20
20-50	1571.02	N.A.	49.20
40-70	1388.69	N.A.	43.50
60-80	615.82	N.A.	19.30
70-80	244.57	N.A.	7.70
80-90	86.64	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	3194.42	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	116.74
10-20	328.38
20-30	479.73
30-40	549.68
40-50	541.61
50-60	475.83
60-70	371.25
70-80	244.57
80-90	86.64
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	15.0	16.6	15.4	17.0	17.3	15.3	16.9	15.7	17.3	17.6
	3H	16.7	18.1	17.0	18.5	18.8	17.6	19.1	18.0	19.4	19.7
	4H	17.3	18.6	17.7	19.0	19.4	18.7	20.1	19.1	20.4	20.8
	6H	17.6	18.9	18.1	19.3	19.7	19.7	21.0	20.1	21.4	21.8
	8H	17.7	19.0	18.2	19.4	19.8	20.1	21.4	20.5	21.8	22.2
	12H	17.8	19.0	18.2	19.4	19.8	20.4	21.6	20.8	22.0	22.4
4H	2H	15.7	17.1	16.1	17.5	17.8	16.0	17.3	16.4	17.7	18.1
	3H	17.6	18.8	18.0	19.2	19.6	18.5	19.6	18.9	20.0	20.4
	4H	18.4	19.4	18.8	19.8	20.3	19.7	20.8	20.2	21.2	21.6
	6H	18.9	19.8	19.4	20.3	20.7	21.0	21.9	21.4	22.4	22.8
	8H	19.1	19.9	19.5	20.4	20.8	21.5	22.3	21.9	22.8	23.3
	12H	19.1	19.9	19.6	20.4	20.9	21.8	22.6	22.3	23.1	23.5
8H	4H	18.9	19.8	19.3	20.2	20.7	20.1	20.9	20.5	21.4	21.8
	6H	19.6	20.3	20.1	20.8	21.3	21.5	22.3	22.0	22.7	23.2
	8H	19.9	20.5	20.4	21.0	21.5	22.1	22.8	22.6	23.3	23.8
	12H	20.0	20.6	20.5	21.1	21.7	22.6	23.2	23.1	23.7	24.2
12H	4H	19.0	19.8	19.5	20.3	20.7	20.1	20.9	20.6	21.4	21.8
	6H	19.8	20.5	20.3	20.9	21.5	21.6	22.3	22.1	22.7	23.3
	8H	20.1	20.7	20.7	21.2	21.8	22.3	22.8	22.8	23.3	23.9

Maximum UGR = 24.2

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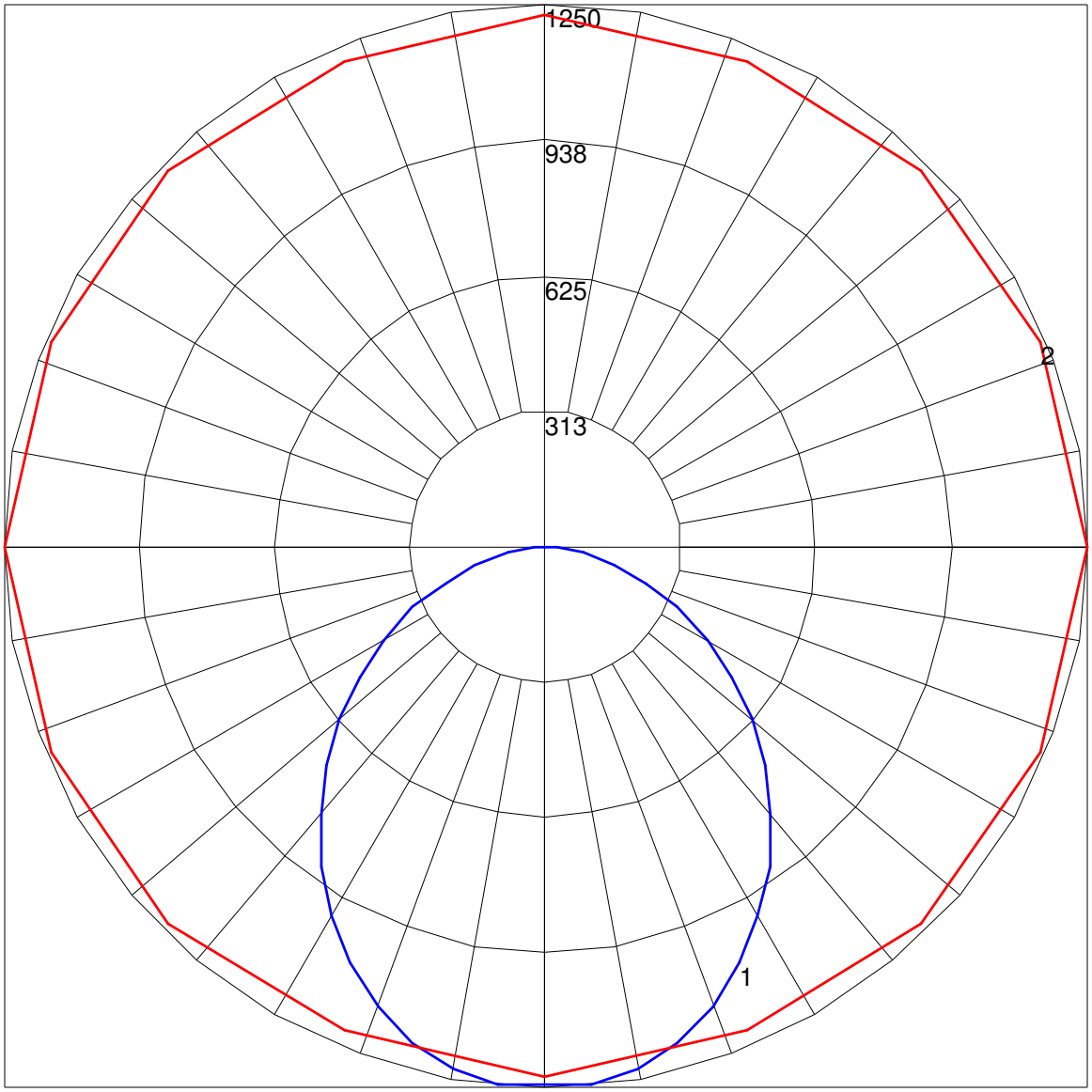
POLAR GRAPH



Maximum Candela = 1250.173 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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