H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L27-850-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] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1 X 4 RECESSED LED LUMINAIRE
[MORE] W/ FROSTED SQUARE RIBBED LENS
[MORE] 0-10V LED DRIVER
[LUMCAT] PT-14-L27-850-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2867
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	153
Total Luminaire Watts	18.8
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	2562	2482	2464
55	2305	2319	2370
65	2014	2229	2442
75	1626	2251	2808
85	754	2429	2935

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1116.563	1116.563	1116.563	1116.563	1116.563
5	1122.110	1109.782	1103.619	1088.209	1102.386
10	1100.537	1087.285	1079.272	1077.731	1079.888
15	1064.171	1051.227	1044.139	1041.673	1039.824
20	1015.785	1003.150	991.439	985.583	986.508
25	955.381	944.902	939.971	924.562	918.706
30	884.806	874.019	862.924	854.603	849.981
35	811.457	801.595	788.343	776.940	770.468
40	727.322	719.309	705.441	696.503	691.264
45	645.961	636.715	625.928	620.997	621.306
50	559.976	557.203	545.492	547.649	550.423
55	471.527	471.527	474.300	481.697	484.779
60	389.241	391.090	403.725	416.361	424.066
65	303.564	314.659	335.924	357.805	367.976
70	221.278	239.770	270.280	299.558	311.577
75	150.087	169.195	207.718	245.625	259.186
80	78.588	111.256	151.320	191.384	204.020
85	23.422	52.700	75.506	85.676	91.223
90	0.000	0.925	1.233	2.157	1.233

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	399.52	N.A.	13.90
0-30	830.11	N.A.	29.00
0-40	1323.48	N.A.	46.20
0-60	2236.7	N.A.	78.00
0-80	2789.43	N.A.	97.30
0-90	2867.2	N.A.	100.00
10-90	2762.42	N.A.	96.30
20-40	923.96	N.A.	32.20
20-50	1410.09	N.A.	49.20
40-70	1246.44	N.A.	43.50
60-80	552.74	N.A.	19.30
70-80	219.52	N.A.	7.70
80-90	77.76	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	2867.2	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	104.78
10-20	294.74
20-30	430.59
30-40	493.37
40-50	486.13
50-60	427.09
60-70	333.22
70-80	219.52
80-90	77.76
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	14.7	16.3	15.1	16.7	17.0	15.0	16.6	15.4	17.0	17.3
	3H	16.4	17.8	16.7	18.2	18.5	17.3	18.8	17.7	19.1	19.4
	4H	17.0	18.3	17.4	18.7	19.1	18.4	19.8	18.8	20.1	20.5
	6H	17.3	18.6	17.8	19.0	19.4	19.4	20.7	19.8	21.1	21.5
	8H	17.4	18.7	17.9	19.1	19.5	19.8	21.1	20.2	21.5	21.9
	12H	17.5	18.7	17.9	19.1	19.5	20.1	21.3	20.5	21.7	22.1
4H	2H	15.4	16.8	15.8	17.2	17.5	15.7	17.0	16.1	17.4	17.8
	3H	17.3	18.5	17.7	18.9	19.3	18.2	19.3	18.6	19.7	20.1
	4H	18.1	19.1	18.5	19.5	20.0	19.4	20.5	19.9	20.9	21.3
	6H	18.6	19.5	19.1	20.0	20.4	20.7	21.6	21.1	22.1	22.5
	8H	18.8	19.6	19.2	20.1	20.5	21.2	22.1	21.6	22.5	23.0
	12H	18.8	19.6	19.3	20.1	20.6	21.5	22.3	22.0	22.8	23.3
8H	4H	18.6	19.5	19.0	19.9	20.4	19.8	20.6	20.2	21.1	21.5
	6H	19.3	20.0	19.8	20.5	21.0	21.2	22.0	21.7	22.4	22.9
	8H	19.6	20.2	20.1	20.7	21.2	21.8	22.5	22.3	23.0	23.5
	12H	19.7	20.3	20.2	20.8	21.4	22.3	22.9	22.8	23.4	23.9
12H	4H	18.7	19.5	19.2	20.0	20.4	19.8	20.6	20.3	21.1	21.5
	6H	19.5	20.2	20.0	20.6	21.2	21.3	22.0	21.8	22.4	23.0
	8H	19.8	20.4	20.4	20.9	21.5	22.0	22.5	22.5	23.0	23.6

Maximum UGR = 23.9

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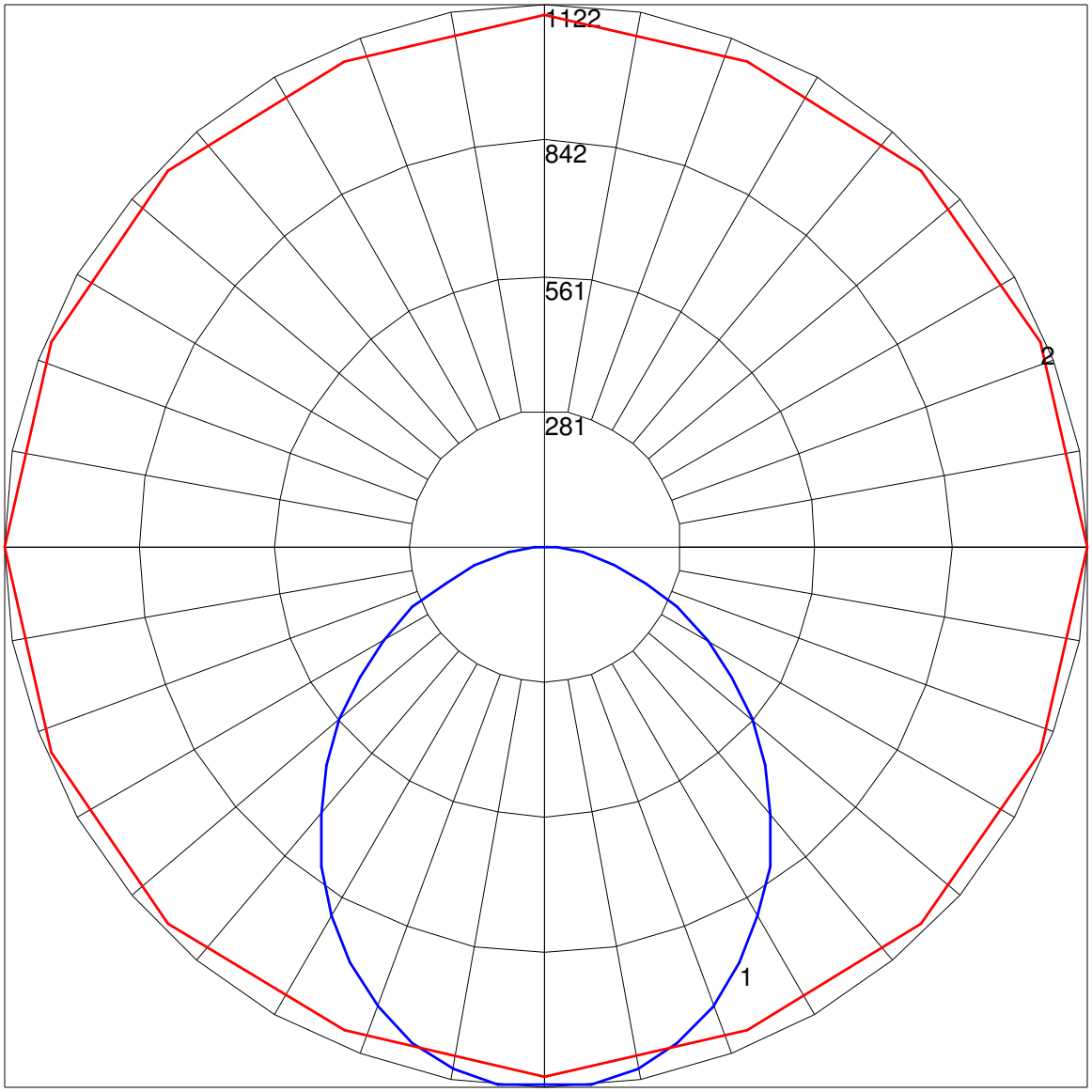
POLAR GRAPH



Maximum Candela = 1122.11 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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