

# Mini Penn

Client:  
LumCAT:  
Luminaire:  
Report No:  
Ballast type:  
Test No: Voltage(V): 220.140  
LampCAT: Current(A): 0.285  
Lamp flux(lm): -1.0 Power (W): 57.140  
Number of Lamps: 1 PF: 0.911  
Length(mm): 0 Width(mm): 0  
Phm Type: C Height(mm): 0

## Photometric Results

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Lumens(lm): 2794.25, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 48.90  
Central intensity(cd): 3614.351, Maximum intensity(cd): 3614.351  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=49.1  
[C90/270]Total=49.7  
Field angle(10%Imax): [C0/180]Total=84.1  
[C90/270]Total=83.4  
Maximum s/h(1/2): C0\_180=0.75 C90\_270=0.72  
Maximum s/h(1/4): C0\_180=0.80 C90\_270=0.77  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 0.00%  
Up flux rate of LUM(%): 0.11%  
Down flux rate of LUM(%): 99.89%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 95.716%

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Equipment:  
Temperature(°C): 25.0

Date:  
Humidity(%): 58.0%

Operator:  
Distance(m): 14.42

Zonal flux distribution table

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$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3574.817	0.000	0	0.00%	0.00%
5.0	3486.924	84.404	84.404	0.00%	3.02%
10.0	3217.205	239.704	324.108	0.00%	11.60%
15.0	2767.400	354.801	678.909	0.00%	24.30%
20.0	2241.853	412.726	1091.635	0.00%	39.07%
25.0	1759.727	419.656	1511.291	0.00%	54.09%
30.0	1308.700	388.231	1899.521	0.00%	67.98%
35.0	857.413	318.991	2218.513	0.00%	79.40%
40.0	466.661	221.020	2439.533	0.00%	87.31%
45.0	200.737	123.602	2563.135	0.00%	91.73%
50.0	80.796	56.877	2620.012	0.00%	93.76%
55.0	56.806	29.950	2649.963	0.00%	94.84%
60.0	49.502	24.588	2674.55	0.00%	95.72%
65.0	45.304	23.036	2697.587	0.00%	96.54%
70.0	47.384	23.449	2721.036	0.00%	97.38%
75.0	47.474	24.805	2745.841	0.00%	98.27%
80.0	41.834	23.971	2769.812	0.00%	99.13%
85.0	17.922	16.371	2786.183	0.00%	99.71%
90.0	0.013	4.984	2791.167	0.00%	99.89%
95.0	0.026	0.005	2791.172	0.00%	99.89%
100.0	0.013	0.005	2791.177	0.00%	99.89%
105.0	0.026	0.005	2791.183	0.00%	99.89%
110.0	0.026	0.007	2791.189	0.00%	99.89%
115.0	0.013	0.005	2791.194	0.00%	99.89%
120.0	0.052	0.011	2791.205	0.00%	99.89%
125.0	0.117	0.032	2791.237	0.00%	99.89%
130.0	0.156	0.051	2791.288	0.00%	99.89%
135.0	0.390	0.105	2791.393	0.00%	99.90%
140.0	0.676	0.193	2791.585	0.00%	99.90%
145.0	1.066	0.283	2791.868	0.00%	99.91%
150.0	1.573	0.383	2792.251	0.00%	99.93%
155.0	2.027	0.452	2792.703	0.00%	99.94%
160.0	2.482	0.470	2793.174	0.00%	99.96%
165.0	2.781	0.431	2793.605	0.00%	99.98%
170.0	3.028	0.342	2793.947	0.00%	99.99%
175.0	3.158	0.220	2794.166	0.00%	100.00%
180.0	3.483	0.079	2794.245	0.00%	100.00%

Equipment:  
Temperature( $^{\circ}$ C): 25.0

Date:  
Humidity(%): 58.0%

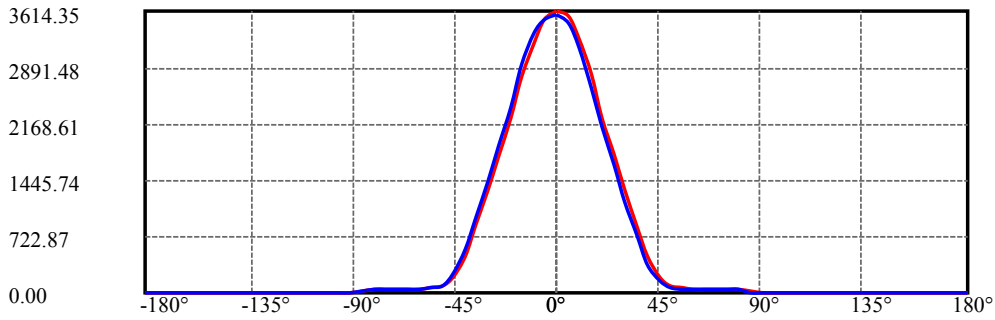
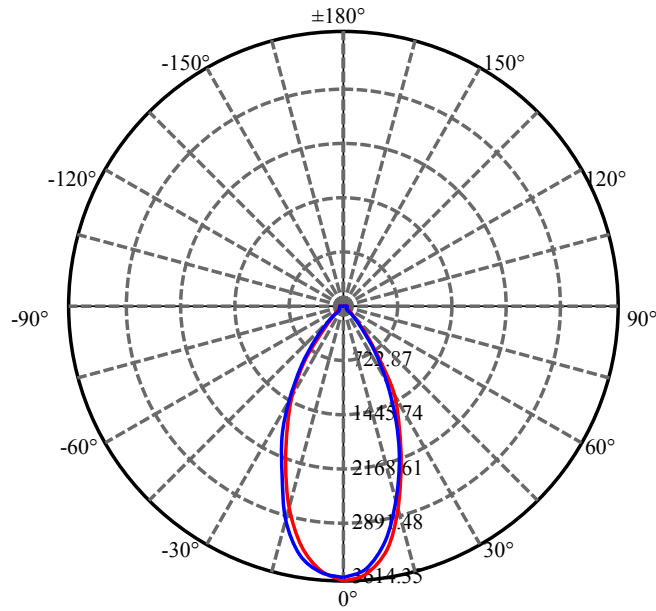
Operator:  
Distance(m): 14.42

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1899.52	N.A.	67.98%
0-40	2439.53	N.A.	87.31%
0-60	2674.55	N.A.	95.72%
0-90	2791.17	N.A.	99.89%
0-120	2791.21	N.A.	99.89%
0-180	2794.25	N.A.	100.00%
60-90	116.62	N.A.	4.17%
90-120	0.04	N.A.	0.00%
90-130	0.12	N.A.	0.00%
90-150	1.08	N.A.	0.04%
90-180	3.00	N.A.	0.11%
0-35.38	2235.40	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	324.11
10-20	767.53
20-30	807.89
30-40	540.01
40-50	180.48
50-60	54.54
60-70	46.49
70-80	48.78
80-90	21.35
90-100	0.01
100-110	0.01
110-120	0.02
120-130	0.08
130-140	0.30
140-150	0.67
150-160	0.92
160-170	0.77
170-180	0.22



C0/C180: —

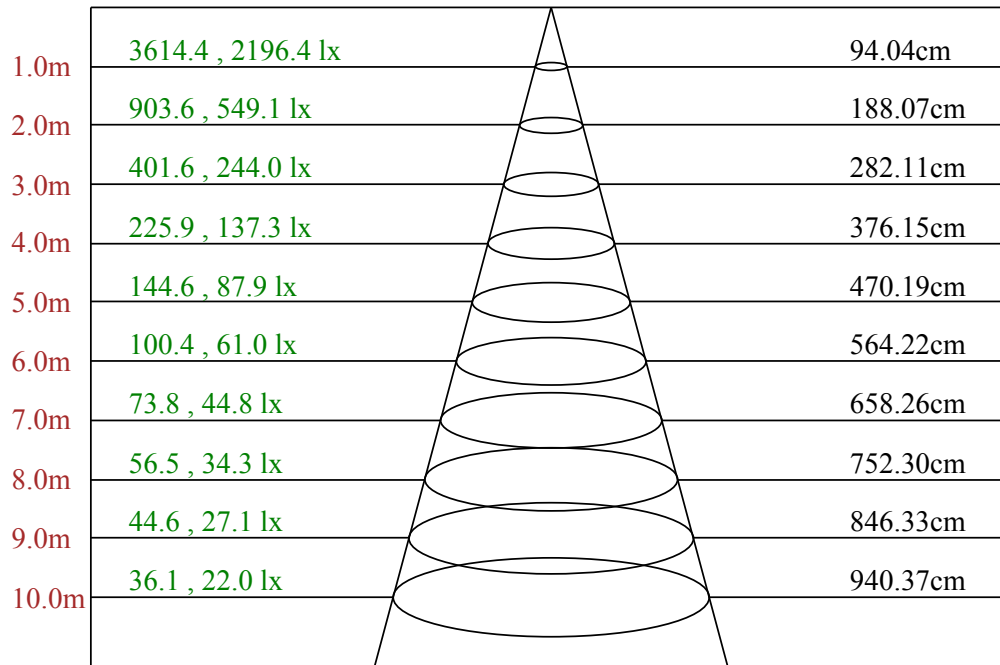
C90/C270: —

Field angle(10%Imax):C0/180Left:42.1 Right:42.0

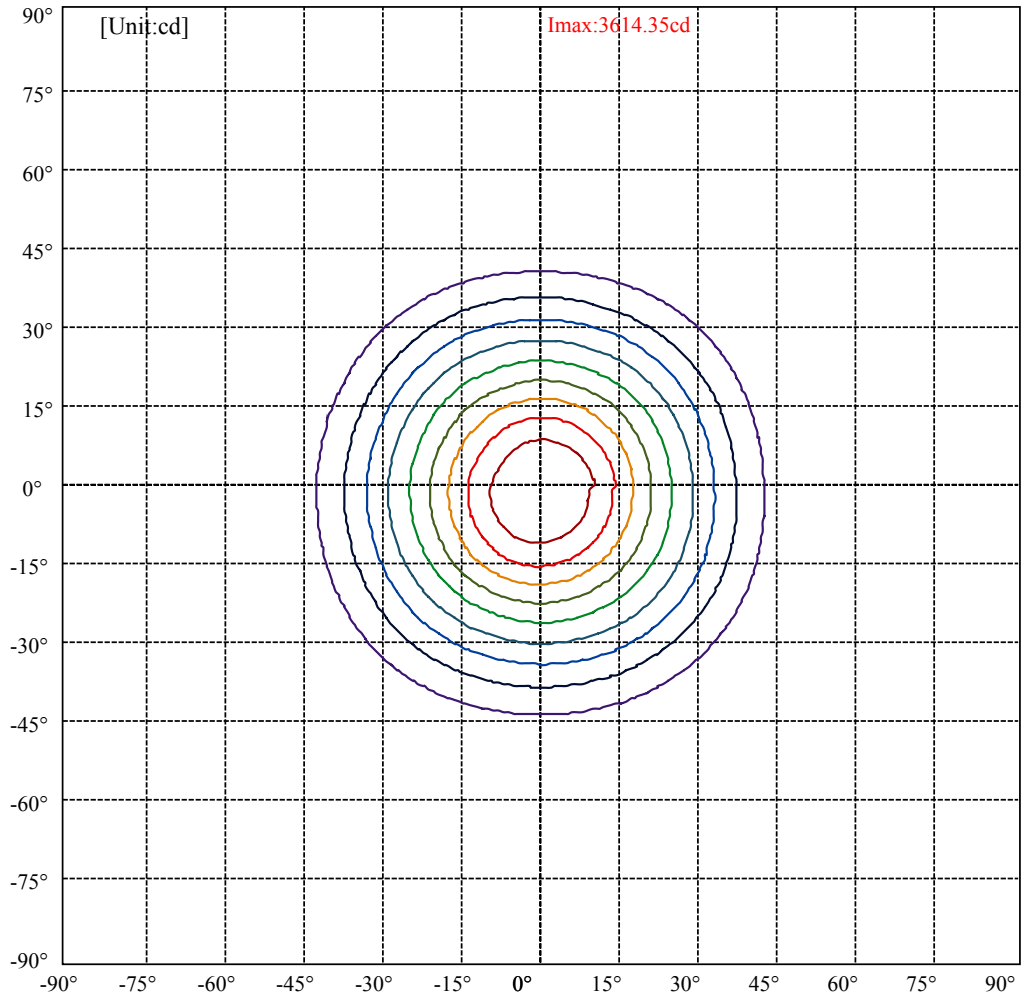
:C90/270Left:43.3 Right:40.1

Beam Angle(50%Imax):C0/180Left:24.5 Right:24.6

:C90/270Left:26.2 Right:23.5



Max , Ave      Beam angle of C0 plane 50.36



(10%Imax) 359.925	—
(20%Imax) 719.851	—
(30%Imax) 1079.78	—
(40%Imax) 1439.7	—
(50%Imax) 1799.63	—
(60%Imax) 2159.55	—
(70%Imax) 2519.48	—
(80%Imax) 2879.4	—
(90%Imax) 3239.33	—

Equipment:  
Temperature(°C): 25.0

Date:  
Humidity(%): 58.0%

Operator:  
Distance(m): 14.42

## Intensity data(cd)

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C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	3614.35	3538.87	3260.86	2795.08	2235.52	1769.12	1331.21	860.44	466.40
22.5	3601.67	3505.18	3208.25	2741.43	2199.34	1720.05	1270.08	816.15	430.43
45.0	3590.44	3483.14	3178.10	2691.53	2162.54	1682.21	1224.33	758.76	399.65
67.5	3579.21	3476.90	3146.29	2667.82	2124.07	1642.07	1188.98	736.09	371.37
90.0	3560.91	3460.69	3140.05	2633.72	2123.65	1639.99	1168.60	739.84	361.19
112.5	3558.00	3454.24	3132.56	2638.50	2098.29	1637.08	1182.95	748.57	371.79
135.0	3552.59	3445.71	3125.08	2633.31	2129.89	1665.99	1193.35	755.43	387.80
157.5	3541.36	3435.94	3137.55	2674.89	2161.71	1703.21	1229.74	792.24	404.23
180.0	3614.35	3493.75	3195.36	2751.83	2237.19	1756.44	1323.31	871.88	475.76
202.5	3601.67	3499.99	3240.69	2809.64	2284.60	1797.19	1353.25	894.33	500.50
225.0	3590.44	3517.45	3283.52	2861.83	2355.92	1839.20	1383.82	941.33	536.68
247.5	3579.21	3515.16	3330.93	2913.19	2382.95	1858.95	1412.72	948.61	554.57
270.0	3560.91	3508.72	3319.08	2915.68	2385.24	1887.23	1430.81	962.54	568.50
292.5	3558.00	3504.98	3294.96	2887.20	2370.89	1873.51	1426.24	977.09	558.31
315.0	3552.59	3481.69	3267.51	2851.85	2325.98	1855.21	1424.78	966.28	545.00
337.5	3541.36	3468.38	3214.49	2810.88	2291.88	1828.18	1395.05	949.02	534.40
360.0	3614.35	3538.87	3260.86	2795.08	2235.52	1769.12	1331.21	860.44	466.40
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	203.57	79.43	56.14	49.28	45.95	47.41	46.79	39.09	12.48
22.5	179.24	71.53	54.06	47.62	45.12	47.41	46.99	39.51	13.93
45.0	165.93	67.37	53.65	47.62	45.33	48.45	48.24	39.72	13.10
67.5	143.89	66.96	53.44	47.41	46.16	50.11	49.70	39.51	9.57
90.0	154.50	67.79	54.69	47.83	46.58	49.90	49.28	37.01	6.86
112.5	154.29	68.41	55.52	48.03	46.37	50.32	50.94	40.34	9.98
135.0	163.65	67.58	55.10	47.41	44.91	50.11	50.94	41.59	13.93
157.5	181.32	71.74	56.14	47.83	44.08	49.28	50.32	43.87	17.88
180.0	199.00	82.34	57.81	49.70	44.08	46.79	48.66	46.16	21.21
202.5	220.83	84.84	57.81	50.32	43.87	45.54	45.33	44.91	24.74
225.0	234.14	91.91	60.30	51.98	45.12	46.58	46.16	45.12	25.37
247.5	238.71	96.07	59.05	50.94	45.12	46.16	46.16	45.33	26.41
270.0	249.73	96.69	59.26	51.98	46.16	46.79	46.99	43.87	23.70
292.5	247.65	94.82	59.47	51.98	45.95	45.75	46.37	43.25	24.54
315.0	241.83	95.86	58.64	51.15	44.91	44.08	43.46	40.96	22.67
337.5	233.51	89.41	57.81	50.94	45.12	43.46	43.25	39.09	20.38
360.0	203.57	79.43	56.14	49.28	45.95	47.41	46.79	39.09	12.48
C/ $\gamma$ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.21	0.42	0.21	0.42	0.42	0.21	0.42	0.62	0.62
22.5	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.42
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.21
67.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.21
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.21
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.21
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.42
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.21
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
292.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
337.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360.0	0.21	0.42	0.21	0.42	0.42	0.21	0.42	0.62	0.62

Equipment:  
Temperature(°C): 25.0Date:  
Humidity(%): 58.0%Operator:  
Distance(m): 14.42

Intensity data(cd)

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C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.83	1.46	1.66	2.08	2.50	3.12	3.53	3.74	3.74
22.5	0.83	1.04	1.46	1.87	2.08	2.91	2.91	3.33	3.12
45.0	0.62	0.83	1.04	1.66	2.08	2.50	2.91	3.12	3.33
67.5	0.62	0.83	1.25	1.87	2.29	2.50	3.12	3.12	3.33
90.0	0.62	1.04	1.04	1.66	2.29	2.70	2.91	3.12	3.33
112.5	0.42	0.83	1.25	1.66	2.08	2.70	2.91	3.12	3.33
135.0	0.62	0.83	1.46	1.66	2.08	2.29	2.91	3.12	3.12
157.5	0.62	0.83	1.25	1.66	2.29	2.70	2.91	2.91	3.33
180.0	0.62	0.83	0.83	1.66	2.08	2.70	2.91	2.91	3.12
202.5	0.21	0.21	0.83	1.46	1.66	2.29	2.50	2.91	2.91
225.0	0.00	0.21	0.83	1.46	1.87	2.08	2.29	2.91	3.12
247.5	0.00	0.42	1.04	1.25	1.66	2.29	2.70	2.91	2.91
270.0	0.00	0.42	0.62	1.46	1.87	2.29	2.50	2.91	2.70
292.5	0.21	0.42	1.04	1.25	1.87	2.29	2.50	2.70	3.12
315.0	0.00	0.21	0.62	1.25	1.66	2.08	2.50	2.70	2.91
337.5	0.00	0.42	0.83	1.25	2.08	2.29	2.50	2.91	3.12
360.0	0.83	1.46	1.66	2.08	2.50	3.12	3.53	3.74	3.74

C/γ(°)	180.0
0.0	3.95
22.5	3.53
45.0	3.53
67.5	3.33
90.0	3.33
112.5	3.33
135.0	3.53
157.5	3.33
180.0	3.95
202.5	3.53
225.0	3.53
247.5	3.33
270.0	3.33
292.5	3.33
315.0	3.53
337.5	3.33
360.0	3.95

Equipment:  
Temperature(°C): 25.0

Date:  
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Operator:  
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