

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: LUMARK

Report Number: 764688

Luminaire Tested: **HPWR-65-X-400**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: 764688  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: HPWR-65-X-400  
Description: FLOODLIGHT - 6H x 5V  
Light Source: 400 WATT HPS CLEAR E-18 HOR  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 50000 (1 lamp)  
Luminaire Lumens: 29008 lumens  
Efficiency: 58.0%  
Efficacy: 72.5 lumens/watt  
Luminous Opening: Point Source (0' x 0' x 0')  
IES Classification: Type I - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

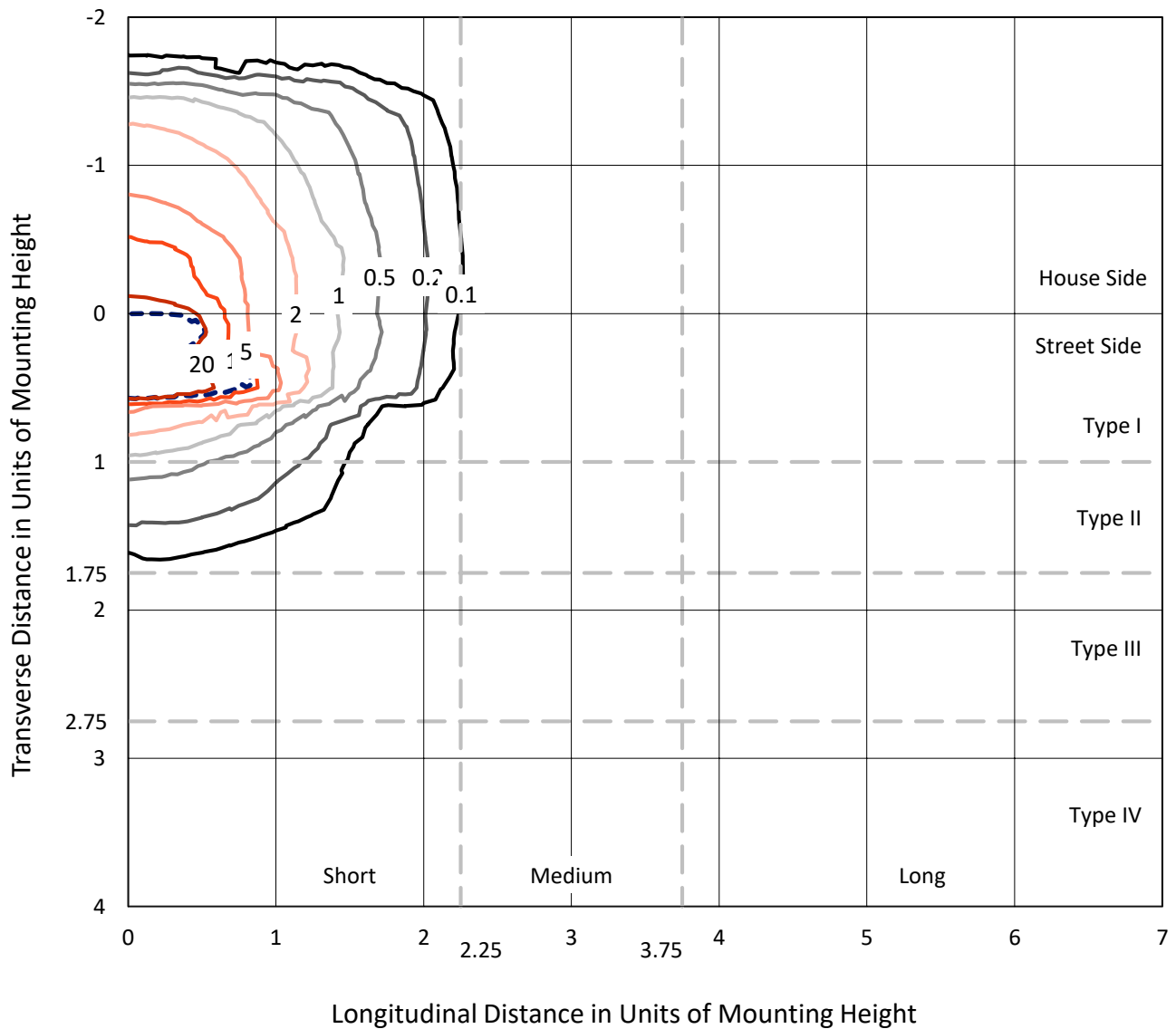
Input Watts (W): 400  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

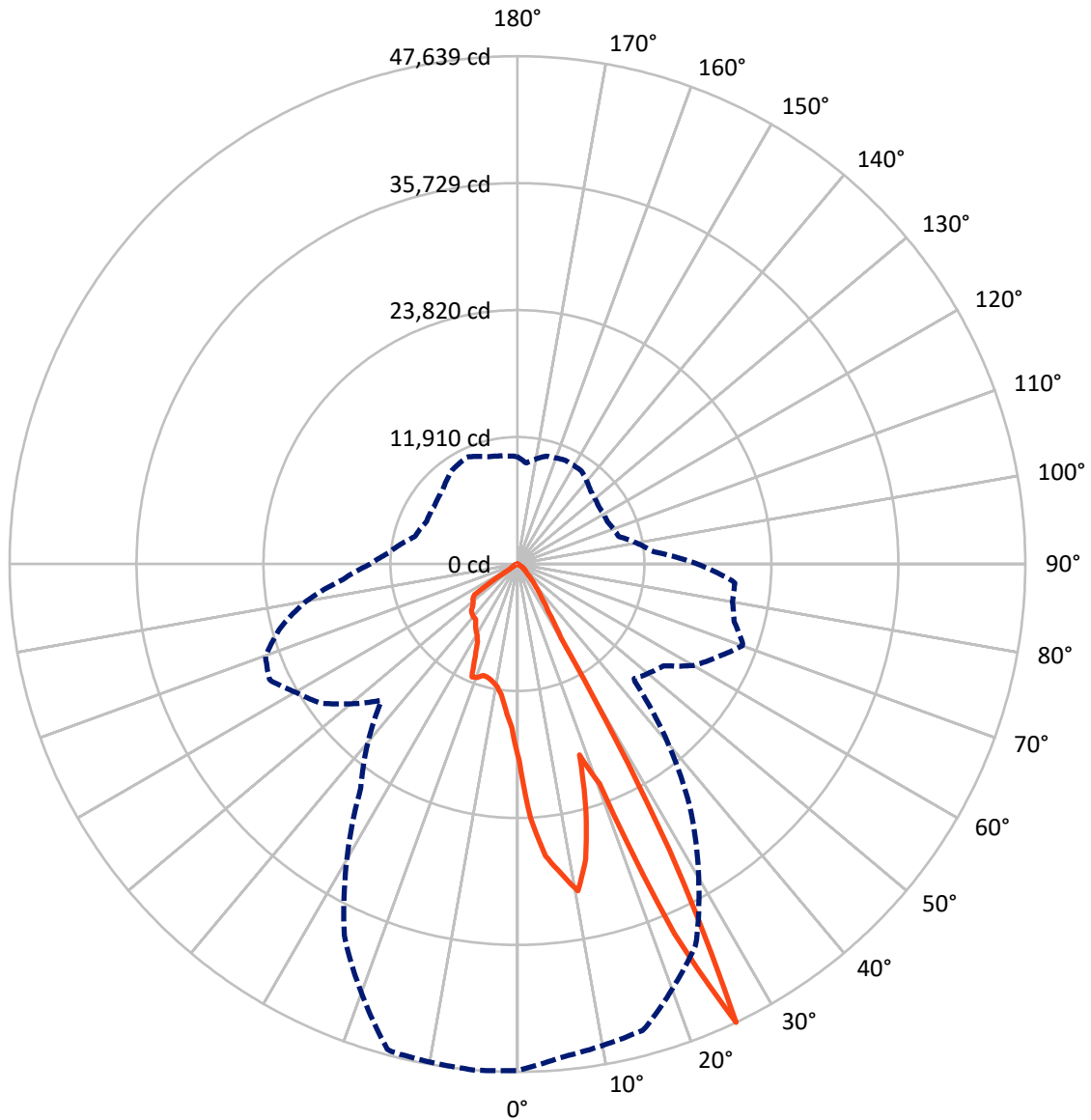
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 43.5 fc  
 Type I - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 355.1-Deg Lateral    - - - Horizontal Cone Through 25-Deg Vertical

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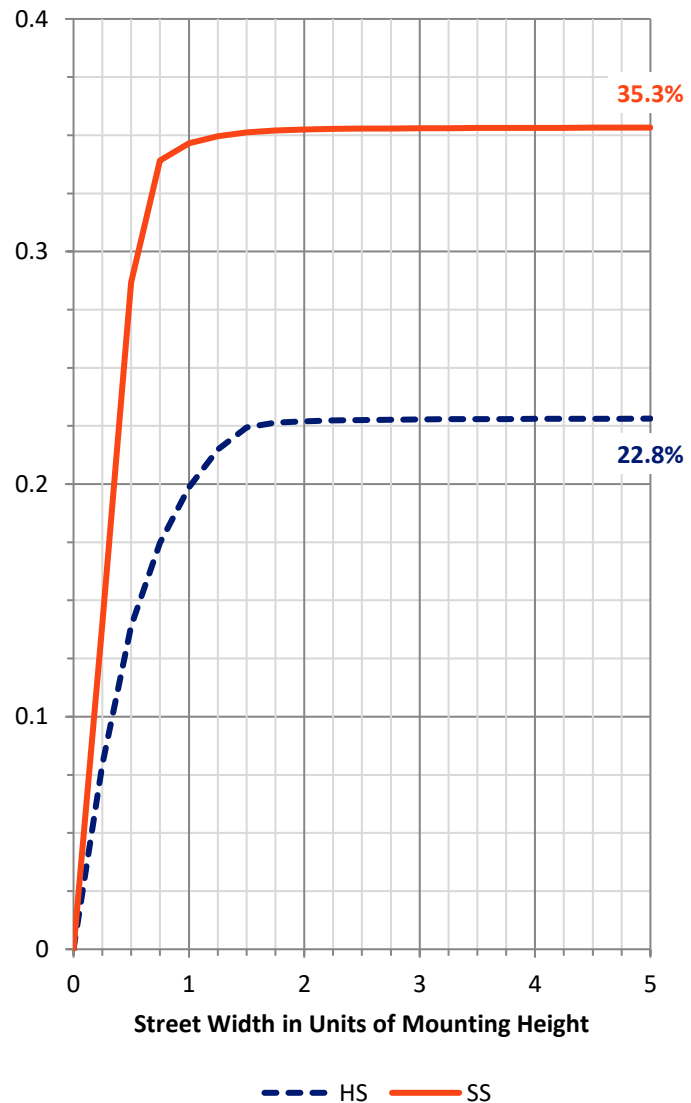
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	11483.1	0.0	11483.1
	% Lamp	23.0	0.0	23.0
<b>Street Side</b>	Lumens	17524.9	0.0	17524.9
	% Lamp	35.0	0.0	35.0
<b>Total</b>	Lumens	29008.0	0.0	29008.0
	% Lamp	58.0	0.0	58.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	1894.9	6.5	3.8
10°-20°	5233.5	18.0	10.5
20°-30°	8240.2	28.4	16.5
30°-40°	6313.3	21.8	12.6
40°-50°	4104.8	14.2	8.2
50°-60°	2383.3	8.2	4.8
60°-70°	708.4	2.4	1.4
70°-80°	97.4	0.3	0.2
80°-90°	32.2	0.1	0.1
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	29008.0	100.0	58.0
0°-180°	29008.0	100.0	58.0



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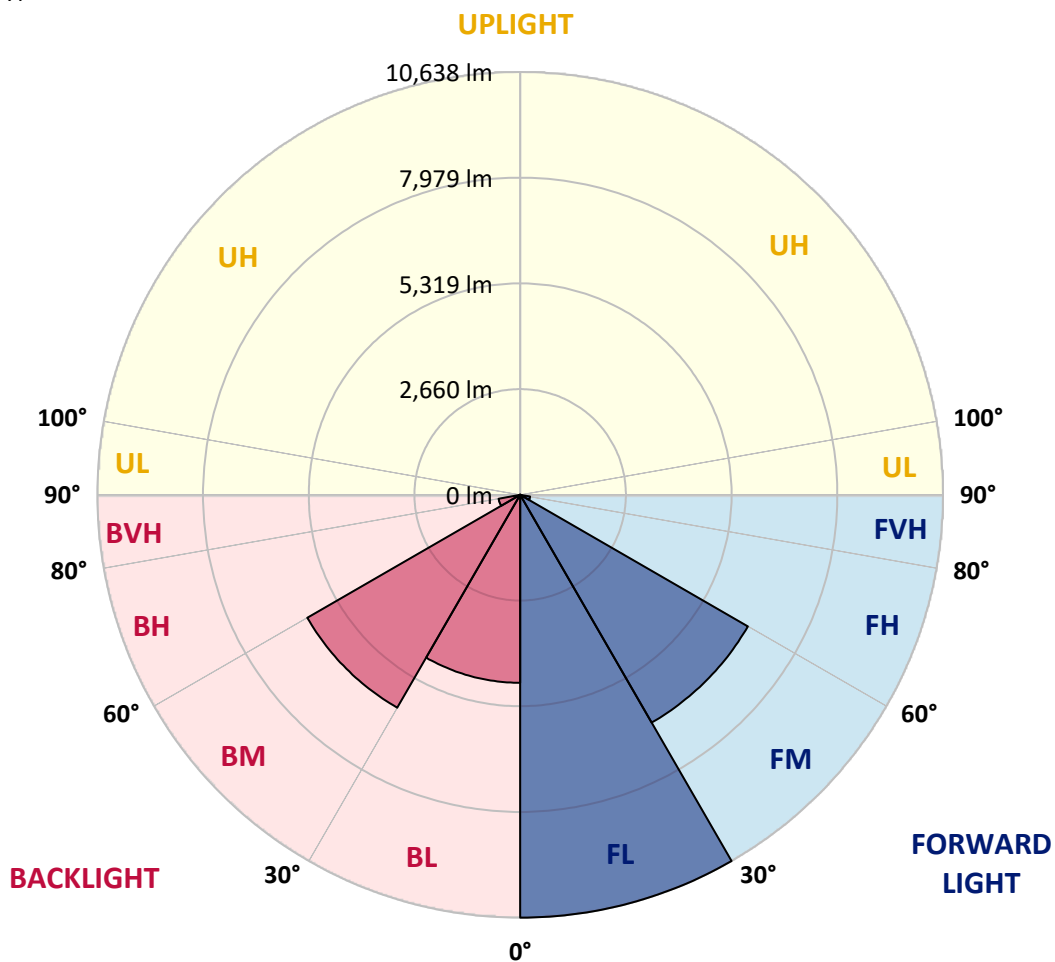
CATALOG NUMBER: HPWR-65-X-400

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	10638.5	21.3			
FM (30°-60°)	6616.2	13.2			
FH (60°-80°)	254.0	0.5			G0/660
FVH (80°-90°)	16.2	0.0			G1/100
BL (0°-30°)	4730.1	9.5	B4/5000		
BM (30°-60°)	6185.2	12.4	B4/8500		
BH (60°-80°)	551.8	1.1	B2/1000		G2/1000
BVH (80°-90°)	16.0	0.0			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	
Trapped Light	20992.0	42.0			

**BUG Rating: B4-U0-G2**

Type I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5.2°	15.2°	25.2°	35.2°	45.2°	55.2°	60.2°	65.2°	70.2°	75.2°
0°	18418	18418	18418	18418	18418	18418	18418	18418	18418	18418	18418
2.5°	24882	23757	25174	22548	23382	23298	22006	21215	20423	20714	19714
5°	27341	27466	27091	27091	27258	26800	24924	23882	22882	22673	21381
7.5°	27925	29217	28217	27675	26299	26008	26841	26258	25799	24174	23215
10°	31217	31176	31009	30551	25633	26925	25174	25007	25966	25549	24215
12.5°	28175	28342	29634	30009	30092	29134	27216	25341	24466	25716	25174
15°	23298	23715	23007	26258	26925	28425	28467	26925	24799	23757	25091
17.5°	18005	18422	18047	21381	23173	25132	27841	27508	25799	23674	23757
20°	20214	18881	19047	17130	18505	21506	24924	26424	25883	23924	22423
22.5°	36636	39970	32259	25549	13754	17380	21881	22048	23632	23590	21506
25°	47514	46430	45263	39387	28175	15296	16713	19131	20714	22507	21006
27.5°	26133	24424	37844	44846	39720	23632	14046	15963	17755	19089	19672
30°	9336	9378	9795	25341	41721	34343	13837	13254	14879	15838	17297
32.5°	5460	5502	5377	6669	23215	41095	18714	11712	11920	12754	14379
35°	3959	4126	3959	4168	6210	30050	27008	16255	9878	10170	9836
37.5°	2959	2792	3126	3209	3793	13462	36177	23298	10503	8044	7377
40°	2376	2417	2376	2751	2918	4335	27091	30551	14713	6752	6252
42.5°	1917	1792	1876	2334	2501	2834	13254	30259	18505	7002	5627
45°	1334	1334	1334	1500	2167	2251	5668	19089	22257	8086	5168
47.5°	1084	1084	1084	1125	1375	1834	2918	5835	19047	8669	4626
50°	959	875	959	959	1000	1584	1751	2834	7335	8461	4210
52.5°	792	750	792	875	834	1000	1375	1625	3459	6335	3793
55°	667	625	709	750	792	792	1042	1167	1625	4001	3334
57.5°	458	542	584	625	750	709	792	750	875	2626	2501
60°	333	417	417	458	584	667	542	542	625	709	2292
62.5°	208	208	292	292	375	584	458	417	333	375	1792
65°	167	167	167	208	208	292	375	292	250	250	917
67.5°	125	125	125	125	167	167	292	250	167	208	250
70°	83	83	83	83	125	125	167	125	125	167	125
72.5°	83	83	83	83	83	83	125	125	125	83	83
75°	83	42	83	83	83	83	83	83	83	83	83
77.5°	42	42	42	42	42	42	42	42	42	42	42
80°	42	42	42	42	42	42	42	42	42	42	42
82.5°	42	42	42	42	42	42	42	42	42	42	42
85°	42	42	42	42	42	42	0	0	0	42	42
87.5°	42	42	0	42	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	80.2°	85.2°	90.2°	95.2°	105.2°	115.2°	125.2°	135.2°	145.2°	155.2°	165.2°
0°	18418	18418	18418	18418	18418	18418	18418	18418	18418	18418	18418
2.5°	19339	18714	18339	17964	17297	16463	16547	15755	15921	15880	15254
5°	20506	19297	18505	17714	16547	15630	15088	14713	14713	13712	13671
7.5°	21506	20131	18505	17380	15880	15004	14046	13379	12587	12337	12295
10°	22298	20631	18505	16755	14963	14129	12879	12212	11753	11587	11587
12.5°	23257	21090	18464	16338	14338	13087	11920	11462	11295	11253	11295
15°	23715	21381	18380	15796	13587	11628	11253	10837	10962	11003	10920
17.5°	23882	21465	18172	15213	12754	10878	10503	10503	10628	10711	10795
20°	23465	21340	17755	14588	11837	10295	10045	10128	10295	10670	11087
22.5°	22465	21048	17338	13587	10628	9795	9669	9836	10378	11003	11295
25°	20464	20464	16713	12754	9836	9336	9336	9711	10586	10711	10461
27.5°	18172	18839	15463	11753	9128	8628	9003	9836	10253	9294	8252
30°	15671	15004	13712	10503	8461	8211	8711	9586	9086	8002	7669
32.5°	13212	12254	10837	9336	7836	7794	8711	8586	7335	7252	7294
35°	9253	9253	8628	7794	7085	7419	8628	7169	6835	6919	6919
37.5°	7294	7002	6710	6835	6627	7169	8002	6419	6502	6460	6544
40°	6585	6210	6043	6252	6252	7044	6835	6002	6085	6168	6294
42.5°	5960	5543	5585	5710	5877	6960	5502	5543	5668	6002	6127
45°	5335	5127	5168	5252	5460	6460	5127	5168	5502	5793	6043
47.5°	4460	4710	4501	4543	4876	5585	4793	4835	5335	5460	5710
50°	3918	4251	4043	4126	4501	4210	4418	4668	5168	5210	5293
52.5°	3501	3834	3626	3709	4293	3751	3959	4460	4793	4918	5168
55°	3168	3334	3209	3334	4126	3376	3751	4043	4376	4751	4960
57.5°	2834	2959	2667	2792	3418	3126	3501	3834	4168	3501	2459
60°	2167	2459	2167	2292	2667	2709	3251	3584	3709	625	458
62.5°	1625	1834	1667	1751	1917	2251	2792	3293	959	333	375
65°	1084	959	1084	1209	1375	1709	2292	1625	250	292	333
67.5°	625	500	625	709	834	1125	1625	250	208	250	250
70°	250	167	167	167	250	584	375	167	167	167	167
72.5°	125	125	125	125	167	167	167	125	125	125	125
75°	83	83	83	83	125	125	83	83	83	42	42
77.5°	42	42	83	83	83	83	42	42	42	42	42
80°	42	42	42	42	42	42	42	42	42	42	42
82.5°	42	42	42	42	42	42	42	42	42	42	42
85°	0	42	0	42	42	42	0	0	42	0	42
87.5°	0	0	0	0	42	0	0	0	0	42	0
90°	0	0	0	0	0	0	0	0	0	0	0





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**CANDELA DISTRIBUTION (continued):**

	175.2°	180.1°	185.1°	195.1°	205.1°	215.1°	225.1°	235.1°	245.1°	255.1°	265.1°
0°	18418	18418	18418	18418	18418	18418	18418	18418	18418	18418	18418
2.5°	15338	15171	15713	15588	15338	15630	16130	16296	16380	17088	18005
5°	13754	13546	13421	14171	14004	14504	14588	15296	15505	16213	17213
7.5°	12337	12212	12129	12129	12545	13129	13379	14004	14921	15630	16755
10°	11628	11587	11545	11545	11712	11670	12254	12920	14212	15171	16380
12.5°	11253	11337	11337	11337	11337	11295	11545	12045	13379	14421	15963
15°	11003	10962	11087	11087	11045	11128	11128	11337	12045	13754	15254
17.5°	10920	10962	10962	10878	10795	10837	10795	10837	11253	12837	14546
20°	11295	11378	11337	11212	10795	10586	10461	10253	10545	11920	13796
22.5°	11420	11337	11337	11337	11128	10586	10128	9878	9920	10711	12962
25°	9503	10086	10170	10420	11087	10711	9878	9503	9419	9961	12129
27.5°	8252	8586	8211	8961	9419	10420	9878	9086	8669	9169	10920
30°	7669	7627	7669	8044	8294	9336	9669	8669	8169	8294	9795
32.5°	7335	7294	7335	7419	7586	7627	8961	8586	7711	7627	8711
35°	6919	6877	6919	7002	7210	6960	7877	8461	7335	6877	7752
37.5°	6502	6585	6627	6669	6752	6627	6919	8044	7044	6460	6877
40°	6460	6502	6544	6544	6252	6210	6043	7335	6752	6002	5918
42.5°	6335	6377	6419	6502	6127	5877	5668	6043	6502	5543	5418
45°	6168	6085	6168	6252	6043	5543	5293	5335	6168	5085	4960
47.5°	5710	5835	5918	5835	5835	5418	4960	4793	5752	4460	4501
50°	5460	5585	5543	5585	5418	5210	4710	4418	5127	4168	3918
52.5°	5293	5293	5335	5335	5043	4876	4376	3959	4126	3876	3543
55°	4960	4376	4751	4835	4835	4501	4168	3709	3584	3584	3126
57.5°	750	1042	1417	1625	4335	4293	3918	3459	3084	2918	2584
60°	500	500	500	542	1250	3751	3668	3209	2542	2334	2001
62.5°	417	417	375	458	333	875	3251	2376	1667	1709	1209
65°	333	292	333	375	292	292	834	1709	1084	1084	750
67.5°	208	208	250	292	250	208	208	1084	542	292	375
70°	167	167	167	167	167	167	167	208	167	208	250
72.5°	125	125	83	125	125	125	125	125	125	167	167
75°	83	42	42	83	83	125	83	83	83	125	125
77.5°	42	42	42	42	42	42	42	83	83	83	83
80°	42	42	42	42	42	42	42	42	42	42	42
82.5°	42	42	42	42	42	42	42	42	42	42	42
85°	42	42	42	42	42	42	42	42	42	42	0
87.5°	42	0	42	42	42	42	42	0	0	42	42
90°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	270.1°	275.1°	280.1°	285.1°	290.1°	295.1°	300.1°	305.1°	315.1°	325.1°	335.1°
0°	18418	18418	18418	18418	18418	18418	18418	18418	18418	18418	18418
2.5°	18339	18755	19297	19756	19923	20631	21631	22131	22090	23340	23757
5°	18005	18964	20006	20964	22340	22590	24007	24966	27258	27341	27633
7.5°	17839	19214	20714	22090	23965	25883	26633	27508	27841	27633	27675
10°	17672	19589	21798	23924	25883	27550	27925	28092	28383	28758	30342
12.5°	17422	19797	22465	25216	27216	28217	28550	28842	29342	30384	29842
15°	16963	19923	23048	26174	27883	28550	28967	29259	29592	28008	26633
17.5°	16547	19923	23549	26716	28300	28883	29175	29342	27216	25007	22340
20°	15963	19797	23840	26883	28133	28800	28842	28383	24799	20798	17213
22.5°	15046	18380	22590	25841	27716	28050	27716	25091	21423	17505	23424
25°	13837	16463	20214	23048	25174	25674	24007	22673	18047	25716	38553
27.5°	12129	14504	17588	19964	22048	22798	21173	19172	20131	39428	46972
30°	10753	12420	14713	16922	17964	18047	17839	16130	32051	45347	32343
32.5°	9586	9503	10503	12504	14546	14504	14588	17755	41220	29217	8169
35°	8461	8002	8252	9461	11003	11462	12712	27341	39803	7794	5127
37.5°	7002	7335	7419	7877	8628	9169	16963	34552	14588	4418	4168
40°	6210	6627	6669	6835	7127	9336	24340	34468	5835	3501	3001
42.5°	5627	6002	6002	5543	6335	12462	24591	21381	3126	2626	2251
45°	5127	5252	5085	4918	5752	14004	19547	5210	2459	2084	1876
47.5°	4501	4793	4585	4543	5793	11670	5793	2459	1709	1584	1292
50°	4126	4418	4085	4251	5168	7461	2792	1584	1334	1084	1042
52.5°	3709	3959	3751	3834	4168	3334	1250	1209	1042	917	834
55°	3293	3293	3251	3584	3668	1751	917	792	792	792	667
57.5°	2417	2667	2751	3168	3001	709	584	584	625	584	542
60°	1792	2084	2209	2542	1709	500	458	458	500	458	458
62.5°	1292	1542	1667	1917	584	417	333	333	375	375	292
65°	792	750	917	917	458	375	292	250	250	250	167
67.5°	417	417	542	500	375	292	208	167	167	125	125
70°	250	292	375	333	292	208	167	125	83	83	83
72.5°	167	208	250	250	167	125	125	83	83	83	83
75°	125	125	125	125	125	83	83	83	42	42	83
77.5°	83	83	83	83	83	83	42	42	42	42	42
80°	83	42	42	42	42	42	42	42	42	42	42
82.5°	42	42	42	42	42	42	42	42	42	42	42
85°	42	42	42	42	42	42	42	0	42	42	42
87.5°	0	42	42	42	42	0	0	0	42	42	42
90°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	345.1°	355.1°	360°
0°	18418	18418	18418
2.5°	24382	23882	24882
5°	27550	27508	27341
7.5°	27967	29300	27925
10°	30384	31176	31217
12.5°	28467	28425	28175
15°	24466	24090	23298
17.5°	19339	18839	18005
20°	17505	22006	20214
22.5°	27300	37636	36636
25°	47222	47639	47514
27.5°	33927	30342	26133
30°	13462	8044	9336
32.5°	6627	5377	5460
35°	4418	4043	3959
37.5°	3251	3084	2959
40°	2584	2417	2376
42.5°	2417	1792	1917
45°	1584	1334	1334
47.5°	1125	1084	1084
50°	959	917	959
52.5°	792	750	792
55°	667	625	667
57.5°	500	542	458
60°	375	333	333
62.5°	250	208	208
65°	167	167	167
67.5°	125	125	125
70°	83	83	83
72.5°	83	83	83
75°	83	83	83
77.5°	42	42	42
80°	42	42	42
82.5°	42	42	42
85°	42	42	42
87.5°	42	42	42
90°	0	0	0

(END OF REPORT)