

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: STREETWORKS

Report Number: P23467

Luminaire Tested: **MQSB81203LEDEUSW**

Test Date: 03/27/13



Test Information

Test Method: LM-79-08
Report Number: P23467
Test Lab: INNOVATION CENTER P2
Test Date: 03/27/13
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: MQSB81203LEDEUSW
Description: STREETWORKS SIGNLIGHTER FIXTURE STANDARD WIDE OPTIC DIST
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11388.5 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Luminous Opening: Rectangular (W 1.62' x L: 2' x H: 0')
IES Classification: Type - Short - Non-Cutoff
BUG Rating: B0 - U5 - G1

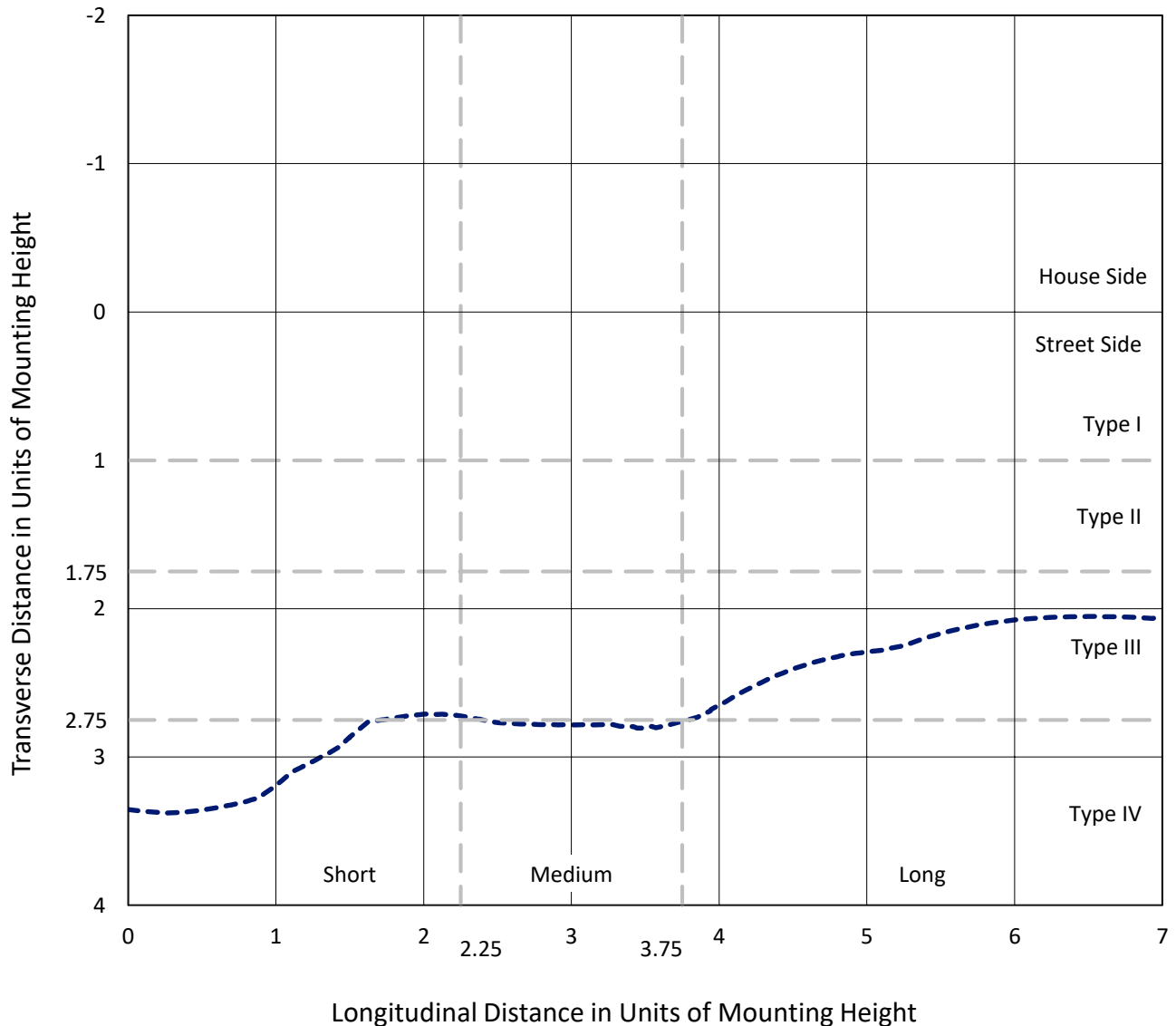
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

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Iso-Footcandle Lines of Horizontal Illumination

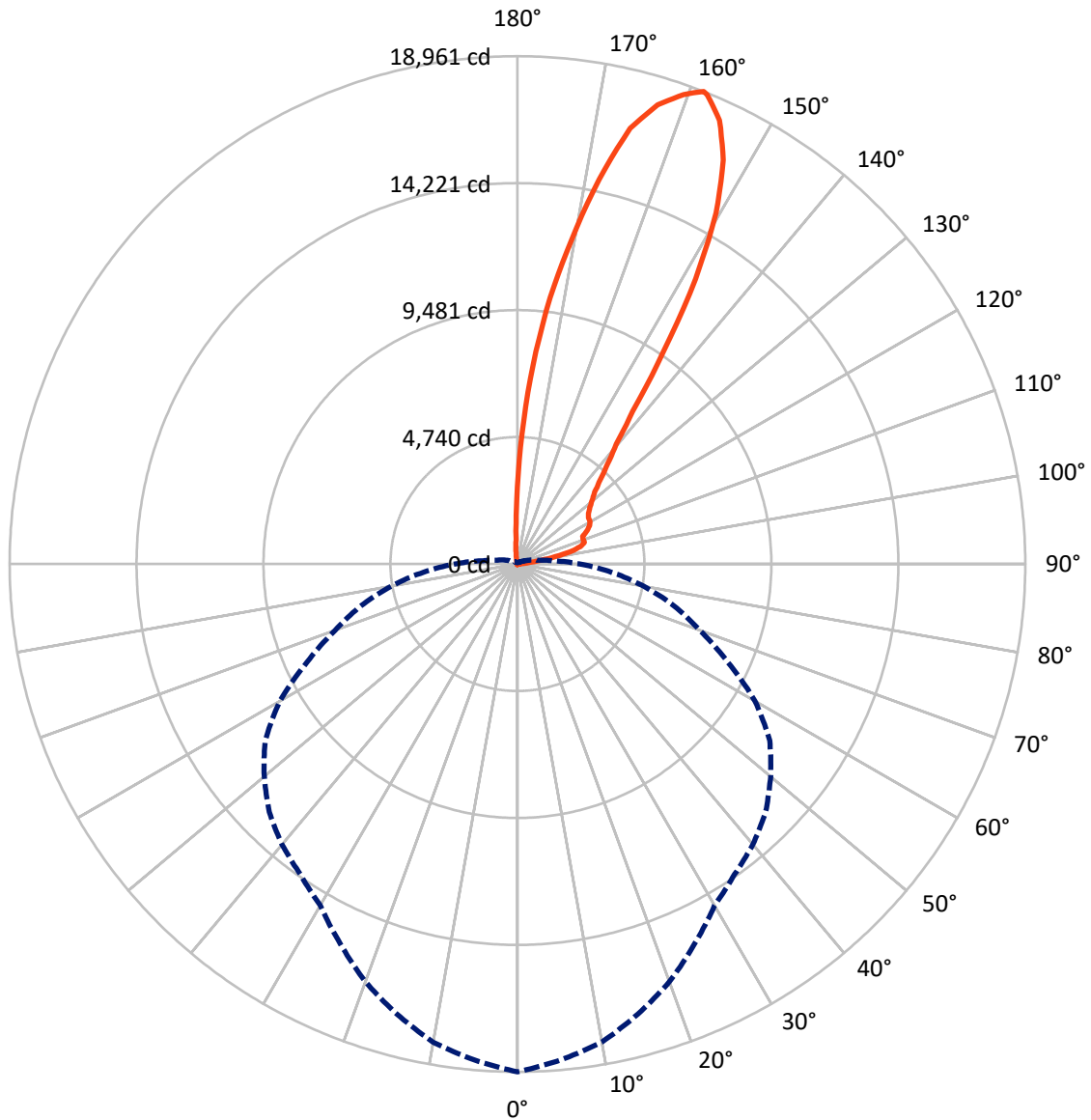
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 0.1 fc
 Type - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 158-Deg Vertical



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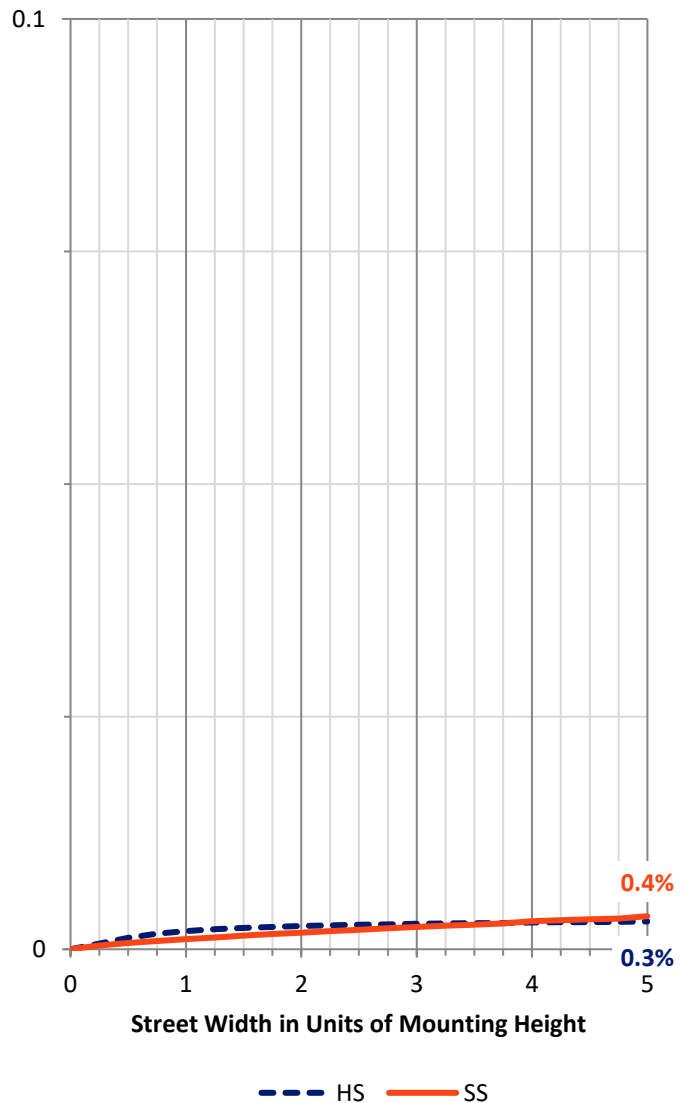
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	36.9	264.5	301.4
	% Fixture	0.3	2.3	2.6
Street Side	Lumens	84.1	11002.9	11087.1
	% Fixture	0.7	96.6	97.4
Total	Lumens	121.0	11267.4	11388.5
	% Fixture	1.1	98.9	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.5	0.0
10°-20°	4.3	0.0
20°-30°	5.9	0.1
30°-40°	6.3	0.1
40°-50°	6.4	0.1
50°-60°	7.7	0.1
60°-70°	11.7	0.1
70°-80°	19.4	0.2
80°-90°	57.7	0.5
90°-100°	284.7	2.5
100°-110°	663.7	5.8
110°-120°	859.5	7.5
120°-130°	989.0	8.7
130°-140°	1369.5	12.0
140°-150°	2380.6	20.9
150°-160°	2706.7	23.8
160°-170°	1643.8	14.4
170°-180°	369.9	3.2
0°-90°	121.0	1.1
0°-180°	11388.5	100.0



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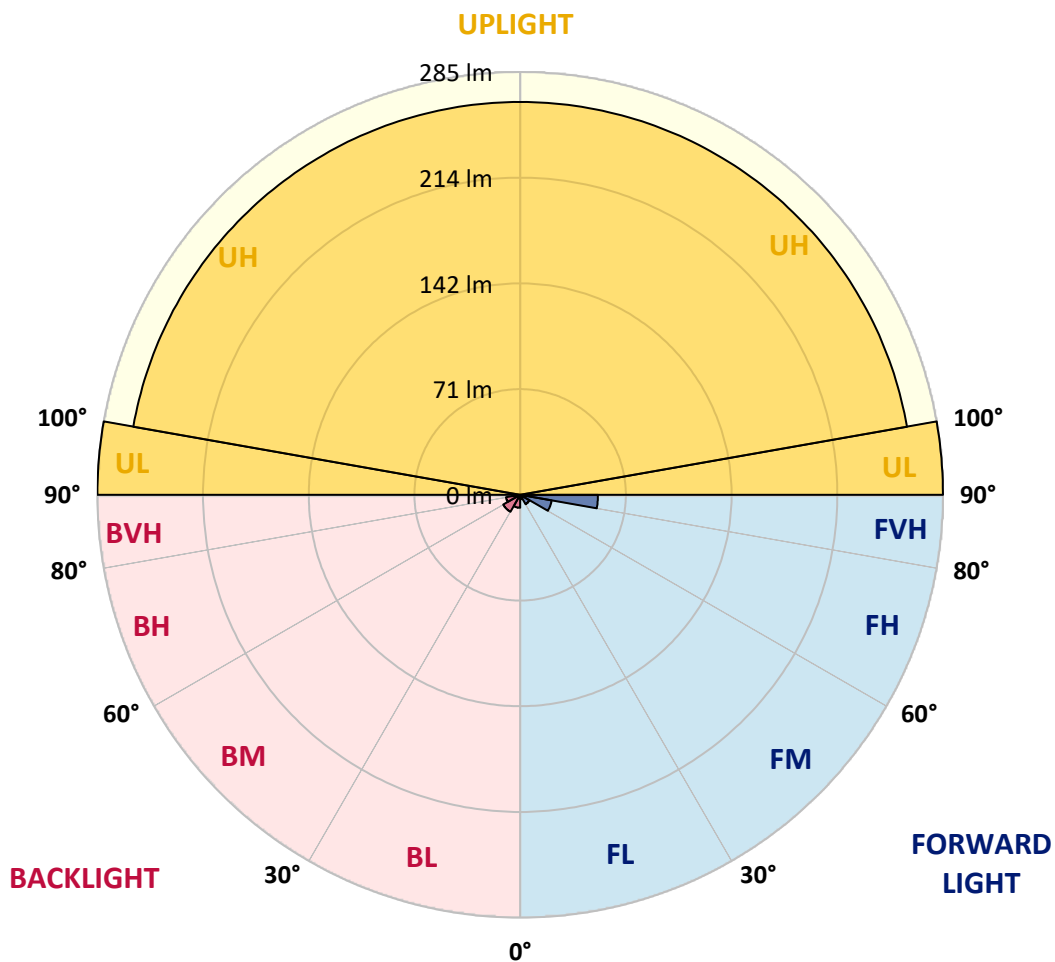
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3.0	0.0			
FM	(30°-60°)	7.2	0.1			
FH	(60°-80°)	21.5	0.2			G0/660
FVH	(80°-90°)	52.4	0.5			G1/100
BL	(0°-30°)	8.7	0.1	B0/110		
BM	(30°-60°)	13.2	0.1	B0/220		
BH	(60°-80°)	9.7	0.1	B0/110		G0/110
BVH	(80°-90°)	5.3	0.0			G0/10
UL	(90°-100°)	284.7	2.5		U3/500	
UH	(100°-180°)	264.5	2.3		U3/500	

BUG Rating: B0-U5-G1

Type Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	14	14	14	14	14	14	14	14	14	14	14
2.5°	8	8	8	9	10	12	13	14	15	15	14
5°	7	7	7	8	9	11	12	13	15	14	14
7.5°	5	5	6	6	7	9	11	12	13	13	13
10°	3	3	3	4	5	7	9	10	12	12	11
12.5°	2	2	2	3	4	6	8	9	11	11	10
15°	1	1	1	2	3	5	7	8	10	10	9
17.5°	0	0	1	1	2	4	6	7	9	9	8
20°	0	0	1	1	2	4	6	7	8	8	8
22.5°	0	0	0	1	2	4	5	6	8	8	7
25°	0	0	0	1	2	4	5	6	8	7	7
27.5°	0	0	0	1	2	4	5	6	7	7	6
30°	0	0	1	1	2	4	5	6	7	7	6
32.5°	0	0	0	1	2	4	5	6	8	7	6
35°	0	0	0	1	2	4	5	6	7	7	6
37.5°	0	0	0	1	2	4	5	6	7	7	6
40°	0	0	0	1	2	4	5	6	7	7	6
42.5°	0	0	0	1	2	4	5	6	8	7	6
45°	0	0	0	1	2	4	5	6	8	7	6
47.5°	0	0	0	1	2	4	6	7	8	8	7
50°	0	0	0	1	3	5	6	8	10	9	8
52.5°	0	0	0	1	3	6	8	9	11	10	9
55°	0	0	1	2	4	7	9	12	13	12	11
57.5°	0	0	1	3	6	9	12	14	15	14	13
60°	0	0	2	4	8	12	14	16	17	16	14
62.5°	4	4	5	8	10	14	16	18	18	17	16
65°	13	12	11	11	12	16	18	19	20	19	17
67.5°	20	19	18	16	16	19	21	21	22	21	19
70°	23	24	24	22	22	24	25	24	24	23	22
72.5°	28	28	28	28	29	29	30	29	28	26	24
75°	34	33	33	33	34	35	34	33	31	29	27
77.5°	40	39	37	37	38	40	39	37	35	33	31
80°	46	45	43	42	42	44	44	43	41	41	40
82.5°	54	53	49	48	48	49	49	50	56	63	79
85°	59	58	55	53	53	55	57	71	121	151	203
87.5°	64	62	61	60	61	63	80	151	290	319	383
90°	72	72	72	72	74	89	179	340	538	561	621
92.5°	90	91	102	112	128	188	381	619	793	782	788
95°	205	211	282	307	328	434	702	916	1004	941	912
97.5°	627	590	642	665	647	798	1054	1161	1137	1037	978
100°	1303	1161	1155	1128	1086	1266	1395	1354	1204	1086	978
102.5°	2006	1806	1654	1527	1489	1630	1676	1492	1276	1161	993
105°	2443	2350	2066	1832	1807	1923	1875	1617	1396	1309	1076
107.5°	2632	2591	2334	2046	2006	2105	2018	1804	1582	1475	1214
110°	2615	2677	2488	2221	2178	2264	2190	2018	1747	1605	1337



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	2648	2754	2610	2437	2392	2433	2375	2213	1892	1664	1410
115°	2871	2946	2792	2708	2623	2566	2526	2374	2044	1727	1463
117.5°	3055	3116	2959	2951	2836	2674	2651	2491	2204	1853	1563
120°	3143	3215	3092	3129	3038	2791	2777	2586	2355	1990	1718
122.5°	3168	3263	3191	3274	3247	2961	2939	2736	2525	2159	1853
125°	3254	3364	3290	3390	3478	3212	3149	2978	2771	2376	2003
127.5°	3429	3520	3463	3560	3740	3577	3443	3317	3116	2712	2240
130°	3666	3752	3742	3848	4078	4024	3874	3777	3534	3138	2596
132.5°	3946	4043	4139	4310	4571	4618	4489	4401	4064	3654	3043
135°	4401	4537	4697	4929	5169	5242	5207	5121	4737	4211	3603
137.5°	5029	5167	5342	5710	6219	6475	6603	6503	6044	5276	4460
140°	5804	6080	6643	7354	7995	8212	8379	8340	7944	7128	6092
142.5°	7145	7777	8434	9211	9819	9908	9987	9934	9599	8884	7782
145°	9632	10078	10369	10890	11282	11354	11412	11240	10775	10111	9078
147.5°	12555	12610	12452	12577	13013	13105	13206	12966	12265	11229	9937
150°	15053	15084	14859	14664	14522	14508	14550	14293	13600	12529	11120
152.5°	16927	17142	16908	16335	15668	15109	15006	14703	14020	13096	11922
155°	18201	18355	18128	17327	16428	15531	15015	14629	14014	13233	12277
157.5°	18902	18655	18240	17457	16620	15667	14757	14227	13758	13144	12349
158°	18961	18584	18130	17393	16598	15647	14721	14138	13670	13101	12338
160°	18596	18289	17650	17055	16413	15455	14581	13782	13270	12806	12126
162.5°	17925	17620	17039	16440	15914	15021	14221	13404	12649	12124	11486
165°	16799	16545	16278	15767	15282	14427	13539	12774	11927	11254	10604
167.5°	14687	14578	14624	14307	13963	13389	12574	11879	11090	10335	9624
170°	12281	12296	12261	11968	11745	11426	10800	10328	9692	9019	8217
172.5°	10018	9950	9828	9535	9306	9068	8543	8235	7777	7317	6757
175°	7452	7387	7406	7214	7089	6880	6602	6362	6165	5859	5456
177.5°	4858	4908	4857	4715	4676	4606	4407	4303	4258	4106	3885
180°	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	14	14	14	14	14	14	14	14	14	14	14
2.5°	13	12	13	14	14	15	15	15	16	16	16
5°	12	12	13	14	15	15	16	16	17	17	17
7.5°	12	11	12	13	14	15	16	16	17	17	18
10°	10	10	11	12	14	15	15	16	17	17	18
12.5°	10	10	11	12	13	14	15	16	17	18	18
15°	9	9	10	11	13	14	15	16	17	17	18
17.5°	8	8	9	10	12	13	14	15	16	16	17
20°	7	7	8	9	11	12	13	14	15	16	16
22.5°	6	7	8	9	10	11	12	13	14	15	15
25°	6	7	8	8	9	10	11	12	13	14	14
27.5°	5	6	7	8	9	10	10	11	12	13	13
30°	5	6	7	8	9	9	10	10	11	12	12
32.5°	5	6	7	8	9	9	10	10	10	11	12
35°	5	6	7	8	8	9	9	10	10	10	11
37.5°	5	6	7	8	8	9	9	10	10	10	10
40°	5	6	7	7	8	9	9	9	9	9	10
42.5°	5	6	7	8	8	9	9	9	9	9	9
45°	5	6	7	8	8	9	9	9	9	9	9
47.5°	6	6	7	8	8	9	9	9	9	9	9
50°	6	7	7	8	8	9	9	9	9	9	9
52.5°	7	7	8	8	8	9	9	9	9	9	9
55°	9	8	8	8	9	9	9	9	9	9	9
57.5°	10	9	9	9	9	9	9	9	9	9	9
60°	12	10	10	10	10	9	9	9	9	9	9
62.5°	13	12	11	10	10	10	10	9	9	9	9
65°	15	14	13	12	11	11	10	10	9	9	9
67.5°	17	15	14	13	12	11	11	10	9	9	9
70°	19	18	17	15	14	12	11	10	10	9	9
72.5°	22	20	19	18	16	14	12	11	10	9	9
75°	24	23	22	21	19	16	13	12	10	10	9
77.5°	28	27	26	24	22	18	15	12	11	10	9
80°	37	34	31	28	25	21	17	14	12	10	9
82.5°	66	52	41	35	29	24	20	16	13	11	10
85°	142	105	71	47	34	27	22	18	14	11	10
87.5°	279	214	136	69	43	31	25	20	16	12	11
90°	462	370	251	117	61	36	28	23	18	14	11
92.5°	636	531	385	196	93	46	32	25	20	15	12
95°	785	676	545	307	146	62	36	28	23	17	14
97.5°	890	773	675	431	220	91	43	31	25	19	15
100°	944	819	788	558	313	138	55	35	28	22	17
102.5°	974	853	838	679	408	197	73	40	31	24	19
105°	1013	892	856	779	501	260	97	46	34	26	21
107.5°	1075	940	849	831	600	328	127	53	37	29	23
110°	1135	1002	867	857	695	401	156	63	41	31	25



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	1173	1063	904	857	765	477	191	74	44	33	26
115°	1216	1115	952	859	792	539	231	88	48	35	28
117.5°	1293	1145	1002	882	792	573	281	105	50	36	29
120°	1414	1180	1046	931	790	591	315	122	52	38	31
122.5°	1556	1250	1069	977	819	601	331	129	56	41	33
125°	1719	1371	1101	1016	871	621	323	121	57	44	36
127.5°	1897	1520	1190	1052	920	644	313	114	60	46	39
130°	2099	1695	1349	1136	945	642	313	117	65	51	42
132.5°	2375	1930	1592	1279	991	634	303	127	71	56	47
135°	2852	2266	1864	1467	1059	637	295	135	81	63	52
137.5°	3535	2808	2197	1661	1143	644	305	157	102	76	60
140°	4780	3525	2601	1874	1221	685	359	211	136	95	72
142.5°	6325	4815	3246	2089	1352	796	465	295	190	126	90
145°	7703	6068	4403	2765	1588	1000	635	410	266	173	117
147.5°	8524	7121	5528	3834	2372	1325	867	571	366	240	156
150°	9419	7880	6525	4998	3484	2063	1167	767	513	328	222
152.5°	10410	8826	7313	5968	4533	3044	1775	1018	684	459	302
155°	11132	9646	8036	6690	5364	3975	2604	1499	878	608	423
157.5°	11469	10185	8589	7166	5972	4665	3385	2180	1244	763	549
158°	11499	10244	8668	7241	6056	4786	3517	2318	1346	802	573
160°	11318	10246	8844	7462	6295	5180	3985	2839	1815	1024	669
162.5°	10763	9886	8719	7540	6427	5435	4445	3376	2384	1501	868
165°	9975	9251	8277	7283	6312	5494	4648	3715	2799	1972	1254
167.5°	8956	8310	7502	6714	5942	5286	4615	3834	3029	2296	1659
170°	7598	7069	6456	5927	5460	4980	4387	3735	3086	2473	1936
172.5°	6376	5956	5577	5177	4815	4429	3944	3474	2998	2536	2113
175°	5208	4890	4576	4217	3917	3649	3327	3035	2732	2432	2151
177.5°	3799	3643	3467	3255	3086	2949	2775	2605	2443	2275	2116
180°	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	14	14	14	14	14	14	14	14	14	14	14
2.5°	16	16	17	19	21	20	21	19	18	17	16
5°	17	17	19	21	23	22	23	21	20	19	18
7.5°	18	18	20	22	24	24	24	23	22	21	20
10°	18	19	21	23	25	25	25	24	23	23	22
12.5°	19	20	22	24	27	26	27	26	25	25	24
15°	19	20	22	24	27	27	28	27	26	26	25
17.5°	18	19	21	24	27	27	28	27	26	26	25
20°	17	18	21	23	26	26	27	27	26	25	25
22.5°	16	17	19	22	25	25	26	25	25	24	24
25°	15	16	18	21	24	24	25	24	24	23	22
27.5°	14	15	17	20	22	23	24	23	22	22	21
30°	13	14	16	19	21	21	22	21	21	20	19
32.5°	12	13	15	17	20	20	21	20	19	18	17
35°	11	12	14	16	19	19	19	18	17	17	16
37.5°	10	11	13	15	18	18	18	17	16	15	14
40°	10	10	12	14	17	17	17	16	15	14	13
42.5°	9	10	11	14	16	16	16	15	14	12	11
45°	9	9	11	13	15	15	15	14	12	11	10
47.5°	9	9	10	12	14	14	14	13	12	10	9
50°	9	9	10	11	13	13	13	12	11	9	8
52.5°	9	9	9	11	13	13	13	12	10	9	8
55°	9	9	9	11	13	12	13	11	10	9	8
57.5°	9	9	9	11	13	12	13	11	10	9	7
60°	9	9	9	11	13	12	12	11	10	9	7
62.5°	9	9	9	11	13	12	12	11	10	9	7
65°	9	9	9	11	13	12	13	11	10	9	7
67.5°	9	9	9	11	13	12	12	11	10	9	7
70°	9	9	9	11	13	12	12	11	10	9	7
72.5°	9	9	9	11	13	13	13	11	10	9	7
75°	9	9	10	11	13	13	13	11	10	9	7
77.5°	9	9	9	11	13	13	13	11	10	9	7
80°	9	9	9	11	13	12	12	11	10	9	7
82.5°	9	9	9	11	13	12	12	11	10	8	7
85°	9	9	9	11	13	12	12	11	9	8	7
87.5°	10	9	9	11	12	12	12	11	9	8	7
90°	10	9	9	10	12	12	12	10	9	7	6
92.5°	10	9	9	10	12	11	11	10	8	7	6
95°	11	10	9	10	12	11	11	10	8	7	6
97.5°	12	10	10	11	12	11	11	9	8	7	5
100°	13	11	10	11	12	11	11	9	8	6	5
102.5°	15	12	11	12	13	11	11	9	8	6	5
105°	16	13	12	12	13	12	11	9	8	6	5
107.5°	18	14	13	13	13	12	11	9	8	6	5
110°	20	16	14	14	14	13	12	10	8	6	5



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 CATALOG NUMBER: MQSB81203LEDEUSW

REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°	
112.5°	21	17	15	14	15	13	12	10	8	6	5	0°
115°	23	19	16	15	15	14	13	10	8	6	5	2.5°
117.5°	24	20	18	16	16	14	13	11	8	6	4	5°
120°	26	21	19	17	16	14	13	11	8	6	4	7.5°
122.5°	28	23	21	19	18	15	14	11	9	6	4	10°
125°	30	25	23	21	19	16	14	12	9	6	4	12.5°
127.5°	33	28	25	22	21	17	15	13	10	8	5	15°
130°	37	31	28	25	23	19	17	13	11	9	6	17.5°
132.5°	41	35	31	28	26	22	19	15	12	10	8	20°
135°	45	39	35	32	29	25	22	17	14	11	10	22.5°
137.5°	51	44	40	37	34	29	26	21	18	15	13	25°
140°	59	51	45	42	39	34	31	26	22	19	17	27.5°
142.5°	71	59	53	48	45	39	36	31	27	23	20	30°
145°	87	70	61	55	51	45	41	36	32	28	25	32.5°
147.5°	113	85	72	64	58	51	46	41	37	33	30	35°
150°	149	109	87	74	66	59	53	47	43	39	36	37.5°
152.5°	200	141	108	88	77	68	61	55	50	46	42	40°
155°	273	190	139	109	91	79	71	63	58	53	49	42.5°
157.5°	376	255	184	140	113	95	84	74	68	62	58	45°
158°	399	272	195	148	118	99	87	77	70	64	60	47.5°
160°	491	356	251	187	146	119	103	89	80	74	69	50°
162.5°	605	473	356	259	196	158	133	112	99	90	84	52.5°
165°	749	569	465	370	278	216	179	151	130	116	107	55°
167.5°	1040	700	562	474	397	317	260	212	183	163	147	57.5°
170°	1421	962	701	582	504	445	393	329	284	249	223	60°
172.5°	1709	1323	990	770	653	583	535	485	450	417	381	62.5°
175°	1889	1626	1375	1157	986	859	786	721	686	662	633	65°
177.5°	1962	1823	1691	1561	1450	1362	1262	1161	1096	1057	1000	67.5°
180°	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	2397	70°
												72.5°
												75°
												77.5°
												80°
												82.5°
												85°
												87.5°
												90°
												92.5°
												95°
												97.5°
												100°
												102.5°
												105°
												107.5°
												110°



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TION (continued):

170°	175°	180°
3	3	3
3	3	3
3	2	2
2	2	1
2	1	1
2	1	1
2	2	2
3	2	2
6	4	4
9	8	8
12	12	13
15	15	15
18	18	18
22	21	21
27	26	26
32	31	31
39	38	38
46	45	45
54	53	53
55	54	54
64	62	62
77	76	75
97	95	94
130	127	125
197	192	189
340	329	326
609	601	602
965	950	953
2397	2397	2397

(END OF REPORT)