

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: INVUE

Report Number: P139730

Luminaire Tested: **ENT-E02-LED-E1-BL4**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P139730
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33646)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-E02-LED-E1-BL4
Description: ENTRI LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (42) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5225 lumens
Efficiency: N/A
Efficacy: 111.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

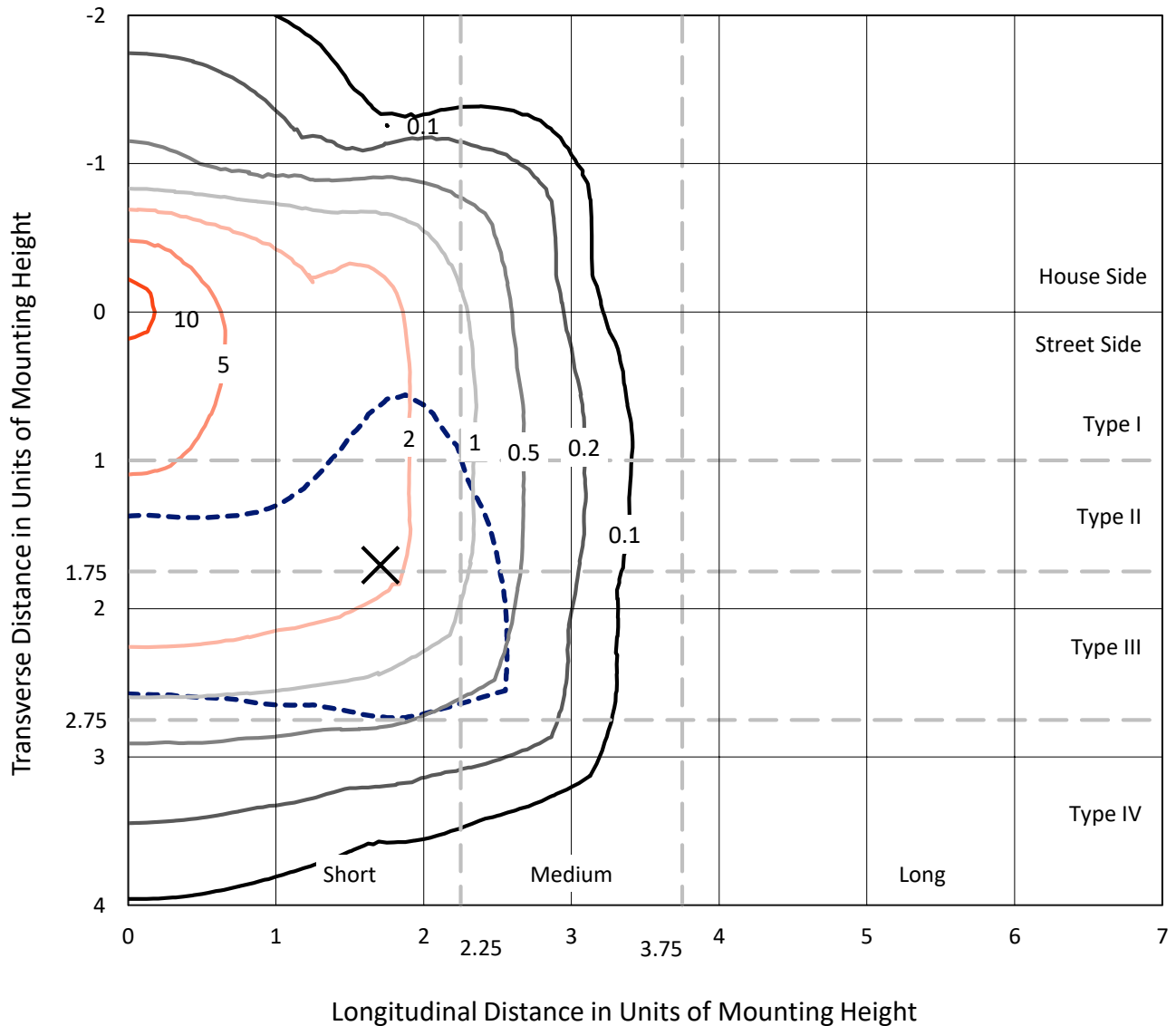
Input Watts (W): 46.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

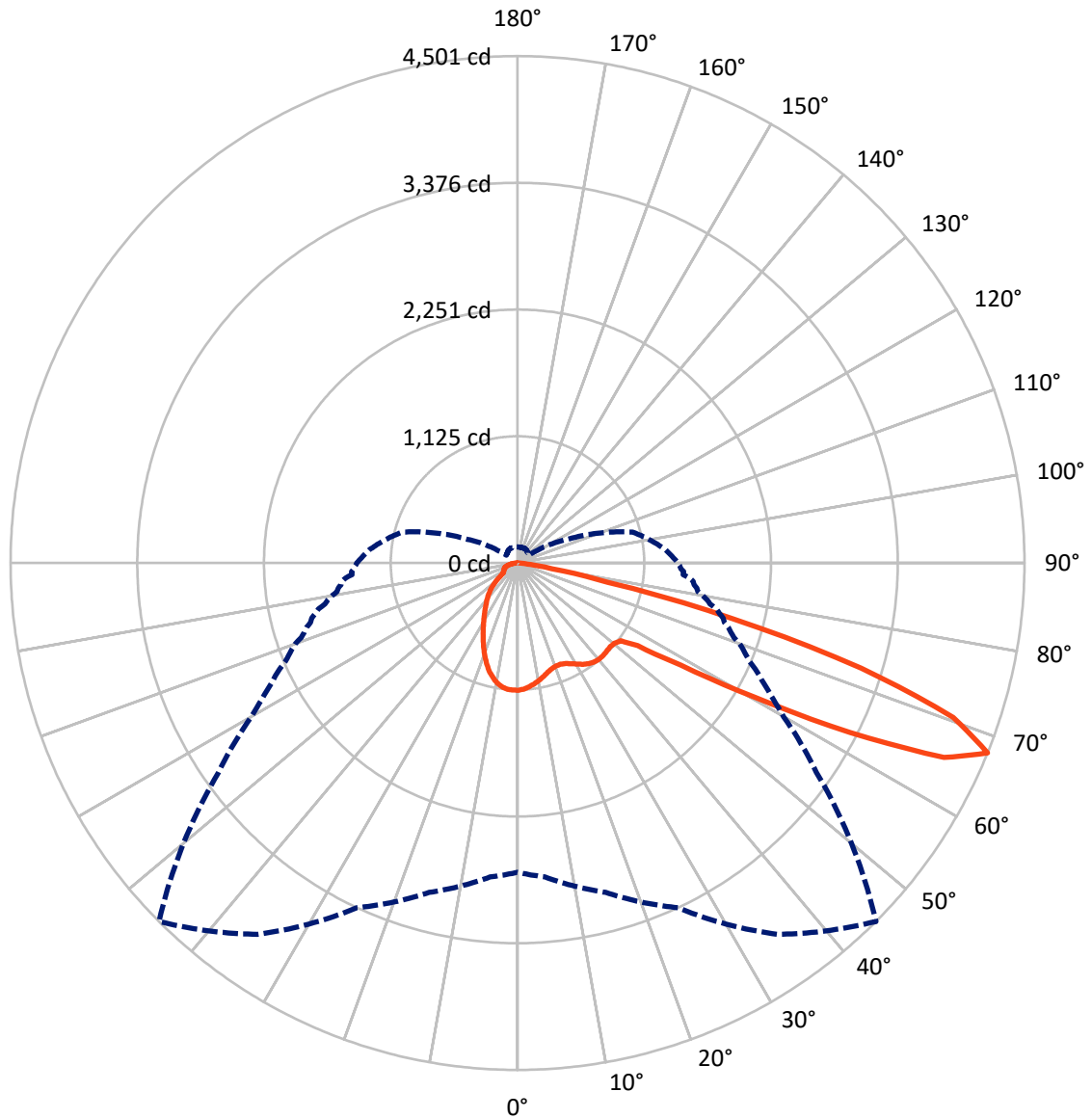
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.3 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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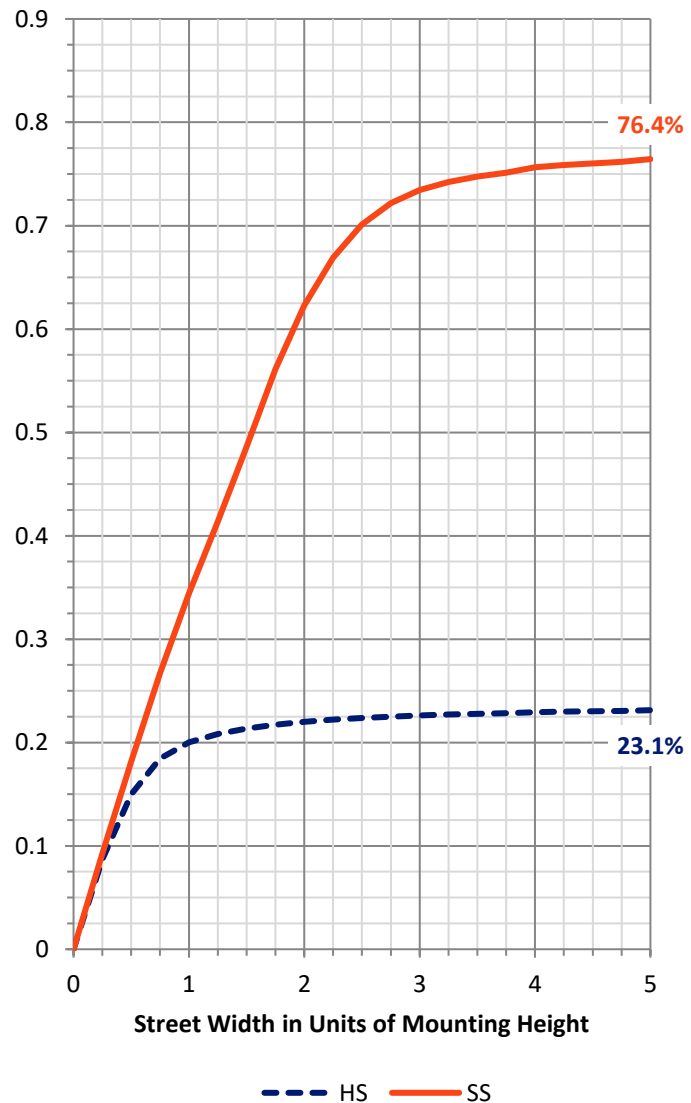
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1224.4	0.0	1224.4
	% Fixture	23.4	0.0	23.4
Street Side	Lumens	4000.7	0.0	4000.7
	% Fixture	76.6	0.0	76.6
Total	Lumens	5225.0	0.0	5225.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.9	2.0
10°-20°	282.3	5.4
20°-30°	406.9	7.8
30°-40°	519.2	9.9
40°-50°	612.8	11.7
50°-60°	982.8	18.8
60°-70°	1654.1	31.7
70°-80°	615.2	11.8
80°-90°	46.8	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	5225.0	100.0
0°-180°	5225.0	100.0



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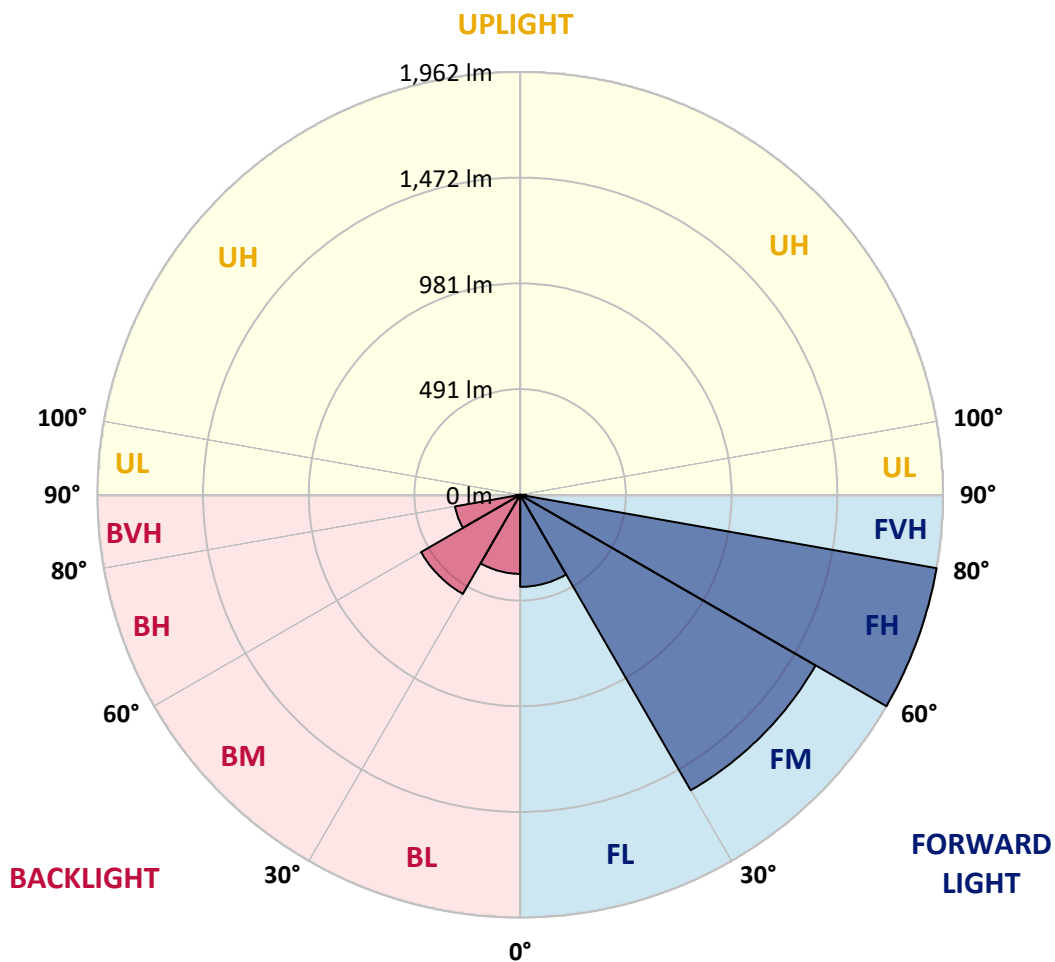
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	427.1	8.2			
FM	(30°-60°)	1583.3	30.3			
FH	(60°-80°)	1962.5	37.6			G2/5000
FVH	(80°-90°)	27.8	0.5			G1/100
BL	(0°-30°)	367.0	7.0	B1/500		
BM	(30°-60°)	531.5	10.2	B1/1000		
BH	(60°-80°)	306.8	5.9	B1/500		G1/500
BVH	(80°-90°)	19.0	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	1129	1129	1129	1129	1129	1129	1129	1129	1129	1129	1129
2.5°	1113	1113	1115	1115	1118	1120	1118	1122	1122	1121	1123
5°	1097	1097	1098	1098	1100	1103	1101	1105	1104	1105	1105
7.5°	1078	1078	1080	1079	1080	1082	1077	1080	1080	1081	1080
10°	1054	1056	1058	1057	1057	1058	1050	1053	1052	1052	1051
12.5°	1032	1030	1032	1034	1033	1033	1025	1023	1023	1023	1024
15°	1009	1011	1014	1011	1009	1005	997	995	995	995	996
17.5°	1004	1004	1006	1003	995	987	971	968	968	967	967
20°	1018	1017	1020	1014	996	975	950	945	945	945	944
22.5°	1047	1047	1052	1045	1016	976	939	931	930	929	927
25°	1103	1102	1105	1087	1045	989	936	924	923	921	919
27.5°	1168	1170	1176	1149	1087	1012	949	929	927	924	920
30°	1232	1238	1249	1220	1135	1041	969	946	942	938	931
32.5°	1313	1311	1329	1285	1177	1072	990	962	957	951	942
35°	1399	1403	1407	1336	1212	1097	1003	971	965	959	946
37.5°	1485	1486	1477	1377	1233	1112	1010	973	965	956	941
40°	1564	1561	1534	1408	1245	1120	1013	969	959	950	933
42.5°	1609	1606	1572	1422	1246	1119	1013	965	954	943	924
45°	1628	1626	1587	1424	1239	1113	1007	961	950	940	920
47.5°	1630	1630	1590	1421	1233	1109	1007	966	957	949	934
50°	1621	1622	1591	1429	1238	1118	1017	978	969	961	944
52.5°	1727	1717	1648	1465	1271	1147	1051	1016	1013	1008	995
55°	2537	2545	2168	1690	1410	1296	1256	1249	1271	1279	1279
57.5°	3221	3195	3053	2466	1844	1707	1723	1740	1772	1786	1796
60°	3388	3390	3386	3219	2722	2410	2332	2258	2255	2229	2209
62.5°	3368	3384	3459	3497	3546	3317	2841	2636	2596	2547	2477
65°	3223	3247	3367	3552	3974	4162	3184	2817	2755	2696	2578
67.5°	2746	2798	3028	3377	4025	4501	3240	2729	2647	2570	2430
70°	1695	1722	2077	2725	3647	4104	2942	2316	2212	2114	1923
72.5°	1094	1085	1145	1535	2680	3189	2023	1540	1455	1377	1254
75°	766	767	740	732	1243	1975	916	658	620	604	578
77.5°	499	505	498	517	498	821	421	309	294	284	268
80°	301	321	327	331	336	310	250	182	164	147	121
82.5°	53	52	72	97	127	145	105	66	62	60	55
85°	0	0	1	1	2	7	11	13	12	13	14
87.5°	0	0	0	1	1	2	2	2	2	2	2
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	1129	1129	1129	1129	1129	1129	1129	1129	1129	1129	1129
2.5°	1123	1122	1121	1121	1123	1123	1122	1122	1123	1122	1124
5°	1106	1105	1105	1104	1105	1106	1105	1105	1106	1105	1107
7.5°	1079	1080	1079	1079	1080	1081	1080	1080	1080	1080	1079
10°	1051	1051	1050	1050	1052	1051	1050	1050	1051	1052	1050
12.5°	1023	1025	1025	1021	1022	1023	1023	1022	1022	1025	1022
15°	995	996	995	996	994	993	994	994	992	991	991
17.5°	967	966	966	964	963	963	962	963	961	962	959
20°	942	941	940	940	937	937	937	936	934	934	933
22.5°	927	926	925	923	922	921	921	920	918	917	916
25°	919	918	916	914	913	912	912	911	909	907	906
27.5°	920	918	916	914	913	911	910	909	907	905	903
30°	929	925	921	918	915	912	910	909	906	903	900
32.5°	938	933	927	921	916	911	908	905	901	896	893
35°	941	935	926	921	914	908	903	899	892	886	881
37.5°	934	927	918	911	904	896	890	884	879	872	867
40°	923	915	906	896	889	881	875	870	863	857	853
42.5°	914	905	895	887	879	871	864	859	852	845	840
45°	911	902	894	884	876	870	864	857	851	845	839
47.5°	927	919	911	903	896	889	883	876	869	861	855
50°	936	927	920	911	903	896	890	883	878	870	864
52.5°	1001	989	991	983	983	975	981	972	977	971	980
55°	1276	1280	1305	1309	1319	1318	1324	1350	1340	1327	1331
57.5°	1769	1778	1791	1779	1788	1790	1807	1800	1794	1790	1777
60°	2197	2185	2166	2143	2134	2124	2107	2107	2085	2078	2061
62.5°	2448	2413	2389	2352	2326	2308	2278	2255	2225	2202	2175
65°	2530	2471	2429	2383	2342	2303	2260	2227	2190	2165	2122
67.5°	2371	2311	2240	2191	2148	2099	2032	1991	1959	1911	1890
70°	1846	1783	1694	1670	1604	1528	1460	1419	1372	1339	1304
72.5°	1171	1100	1061	1032	989	926	867	843	802	793	770
75°	550	502	492	485	438	429	411	403	384	374	370
77.5°	246	235	217	212	197	182	164	156	146	140	132
80°	112	101	94	89	87	82	78	75	72	72	67
82.5°	54	52	50	50	47	47	44	43	42	41	41
85°	15	15	15	16	16	16	16	16	16	17	17
87.5°	2	2	3	3	3	3	3	3	3	3	3
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	1129	1129	1129	1129	1129	1129	1129	1129	1129	1129	1129
2.5°	1123	1123	1123	1125	1124	1127	1127	1127	1129	1130	1129
5°	1107	1107	1107	1108	1108	1110	1110	1112	1112	1113	1113
7.5°	1081	1082	1082	1084	1083	1084	1084	1087	1087	1088	1088
10°	1051	1052	1052	1052	1053	1054	1054	1056	1057	1057	1059
12.5°	1023	1022	1023	1022	1025	1025	1026	1025	1026	1027	1028
15°	992	992	991	992	992	991	990	991	993	993	993
17.5°	961	958	958	958	957	955	957	956	956	957	956
20°	932	931	930	929	928	925	925	925	924	924	924
22.5°	914	913	912	911	907	905	904	903	901	900	899
25°	904	902	900	898	895	892	889	888	886	884	881
27.5°	901	899	895	893	889	886	883	880	877	874	871
30°	896	893	889	886	883	878	874	871	866	863	859
32.5°	889	885	881	877	873	868	863	859	855	851	846
35°	877	872	866	862	857	852	848	841	838	833	828
37.5°	861	856	851	846	840	836	830	824	821	818	811
40°	847	841	836	832	825	822	816	810	806	803	797
42.5°	834	828	823	817	812	808	803	797	793	791	786
45°	834	827	821	816	811	806	802	796	793	789	786
47.5°	848	840	833	826	819	814	808	802	797	794	790
50°	858	850	846	838	834	827	820	817	812	809	808
52.5°	980	975	976	956	952	962	946	960	956	944	944
55°	1354	1352	1361	1336	1325	1345	1353	1324	1331	1331	1329
57.5°	1790	1777	1764	1767	1751	1763	1748	1730	1737	1731	1710
60°	2050	2042	2023	2005	1988	1972	1958	1942	1934	1920	1905
62.5°	2155	2134	2111	2087	2060	2034	2018	1997	1975	1961	1945
65°	2099	2068	2043	2008	1979	1947	1926	1902	1882	1858	1838
67.5°	1849	1813	1747	1715	1672	1622	1608	1579	1568	1532	1473
70°	1259	1223	1183	1118	1076	1033	986	952	947	918	875
72.5°	740	715	689	652	621	604	571	537	536	503	486
75°	350	337	311	302	274	272	251	247	251	241	239
77.5°	119	116	110	102	96	94	89	86	84	82	80
80°	65	63	62	59	57	56	53	52	51	50	49
82.5°	39	40	38	36	36	34	33	32	31	31	31
85°	16	17	16	15	14	15	15	14	13	14	14
87.5°	3	3	3	3	3	3	3	3	3	3	3
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	87°	88°	89°	90°	95°	105°	115°	125°	135°	145°	155°
0°	1129	1129	1129	1129	1129	1129	1129	1129	1129	1129	1129
2.5°	1127	1126	1126	1125	1124	1126	1128	1131	1129	1131	1132
5°	1111	1111	1111	1112	1111	1114	1118	1124	1125	1129	1132
7.5°	1085	1085	1086	1087	1086	1090	1097	1104	1109	1116	1122
10°	1055	1055	1055	1055	1056	1061	1066	1074	1082	1093	1102
12.5°	1028	1025	1026	1028	1026	1026	1031	1037	1042	1056	1072
15°	992	992	990	991	986	985	987	991	995	1007	1024
17.5°	954	954	954	951	947	937	936	936	936	945	965
20°	920	920	918	916	907	890	876	870	868	883	892
22.5°	896	895	891	889	875	848	826	809	804	809	812
25°	877	875	871	867	848	811	776	747	733	729	719
27.5°	866	863	857	853	828	781	735	697	671	652	634
30°	854	849	843	837	809	757	704	657	611	578	552
32.5°	840	835	829	823	792	735	679	621	557	512	473
35°	823	818	812	805	774	717	662	586	509	451	400
37.5°	806	801	795	788	757	708	652	553	465	394	327
40°	793	788	782	776	748	704	647	525	426	338	261
42.5°	782	777	772	766	742	706	636	501	388	282	205
45°	781	778	772	767	744	715	627	480	349	228	173
47.5°	788	784	780	776	758	738	621	458	305	184	165
50°	805	801	799	797	786	769	621	435	254	162	164
52.5°	942	931	928	936	906	821	625	407	199	155	165
55°	1325	1336	1308	1294	1242	950	628	365	162	154	163
57.5°	1712	1712	1702	1680	1616	1170	642	298	148	152	161
60°	1901	1889	1879	1866	1769	1323	663	220	142	151	159
62.5°	1935	1916	1903	1886	1757	1331	672	165	136	151	154
65°	1823	1803	1786	1758	1601	1205	627	135	132	147	149
67.5°	1477	1453	1440	1426	1322	1058	507	121	127	140	144
70°	845	819	804	807	744	837	405	111	120	132	138
72.5°	455	427	418	389	332	422	312	102	111	120	126
75°	225	215	218	204	173	130	201	91	99	108	112
77.5°	78	76	75	74	72	69	92	78	85	92	96
80°	48	47	48	47	46	53	59	62	68	77	78
82.5°	29	29	29	29	29	37	42	48	53	59	64
85°	14	14	14	14	15	25	28	35	37	42	46
87.5°	3	3	3	3	4	13	17	21	22	22	25
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	165°	175°	180°
0°	1129	1129	1129
2.5°	1131	1129	1128
5°	1134	1132	1131
7.5°	1126	1127	1126
10°	1109	1112	1113
12.5°	1082	1088	1092
15°	1037	1046	1044
17.5°	977	988	988
20°	902	907	904
22.5°	810	812	809
25°	713	713	709
27.5°	623	618	615
30°	537	524	520
32.5°	446	424	424
35°	354	336	331
37.5°	275	255	249
40°	211	196	195
42.5°	178	175	176
45°	170	174	174
47.5°	171	176	177
50°	172	177	178
52.5°	172	175	175
55°	170	170	170
57.5°	166	165	167
60°	163	163	163
62.5°	158	158	158
65°	150	151	151
67.5°	142	142	142
70°	132	132	134
72.5°	122	126	128
75°	115	122	125
77.5°	101	108	112
80°	83	84	84
82.5°	66	64	61
85°	47	44	44
87.5°	25	24	25
90°	0	0	0

(END OF REPORT)