

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: NEO-RAY

Report Number: P331522-940

Luminaire Tested: **S122DIW-S485D1440U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331522-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S485D1440U940-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6213.8 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

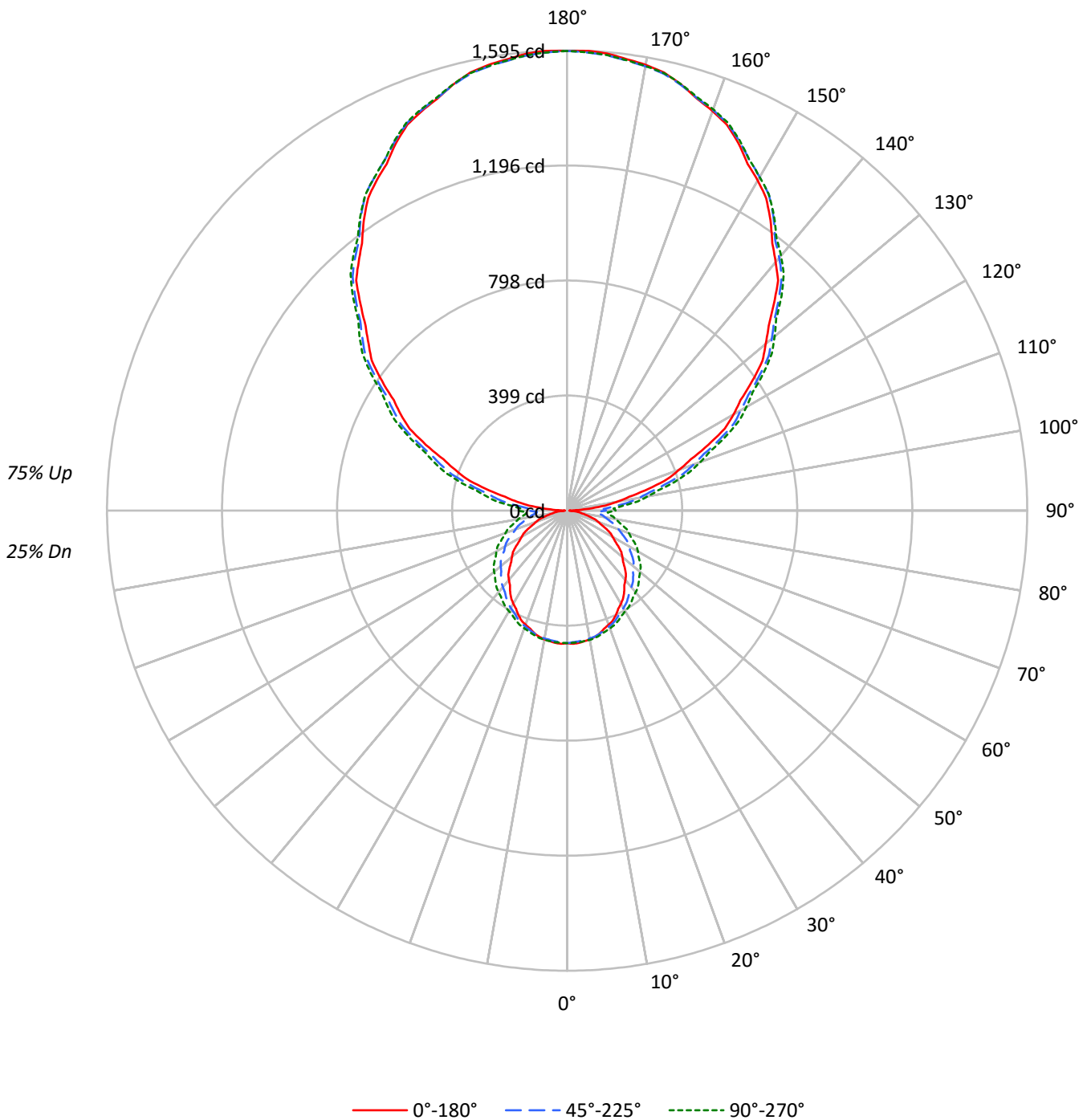
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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
RCR																		
0	101	101	101	101	90	90	90	90	70	70	70	51	51	51	33	33	33	25
1	91	87	83	79	81	77	74	71	60	57	55	43	42	40	28	27	27	20
2	83	75	69	64	73	67	62	58	52	48	45	37	35	33	24	23	22	16
3	75	66	59	53	67	59	53	48	45	41	37	33	30	28	21	20	18	13
4	69	58	50	44	61	52	45	40	40	35	32	29	26	23	19	17	15	11
5	63	51	43	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9
6	58	46	38	32	51	41	34	29	32	27	23	23	20	17	15	13	12	8
7	53	41	33	28	47	37	30	25	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	33	27	22	26	21	18	19	16	13	13	11	9	6
9	46	34	27	22	41	30	24	20	24	19	16	18	14	12	12	10	8	6
10	43	31	24	19	38	28	22	17	22	17	14	16	13	11	11	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7419	7419	7419
5°	7455	7143	7115
10°	7408	6931	6854
15°	7306	6708	6577
20°	7177	6468	6312
25°	7050	6237	6072
30°	6870	5999	5829
35°	6689	5771	5659
40°	6498	5576	5488
45°	6317	5402	5343
50°	6123	5242	5199
55°	5916	5073	5052
60°	5666	4897	4897
65°	5405	4692	4714
70°	5117	4470	4516
75°	4741	4251	4334
80°	4149	4028	4148
85°	3591	3837	4006



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.5	0.7
10°-20°	124.9	2.0
20°-30°	189.2	3.0
30°-40°	230.5	3.7
40°-50°	247.9	4.0
50°-60°	240.8	3.9
60°-70°	210.2	3.4
70°-80°	161.8	2.6
80°-90°	115.0	1.9
90°-100°	175.8	2.8
100°-110°	368.1	5.9
110°-120°	572.0	9.2
120°-130°	724.9	11.7
130°-140°	799.4	12.9
140°-150°	777.0	12.5
150°-160°	650.5	10.5
160°-170°	431.5	6.9
170°-180°	150.8	2.4
0°-30°	357.6	5.8
0°-40°	588.1	9.5
0°-60°	1076.8	17.3
0°-90°	1563.8	25.2
90°-120°	1115.9	18.0
90°-150°	3417.2	55.0
90°-180°	4650.0	74.8
0°-180°	6213.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	461	459	455	459	458	44
15°	440	441	441	446	446	124
25°	400	404	410	418	420	184
35°	344	356	368	382	388	215
45°	282	301	324	344	351	218
55°	216	241	275	298	308	193
65°	148	181	220	246	256	147
75°	82	119	162	189	199	87
85°	24	65	108	135	145	26
90°	8	64	135	158	168	8
95°	75	120	163	187	193	84
105°	292	316	353	378	386	309
115°	540	556	583	601	605	534
125°	784	796	813	827	832	700
135°	1013	1027	1037	1049	1051	782
145°	1229	1238	1246	1251	1250	767
155°	1405	1409	1413	1419	1416	646
165°	1528	1527	1527	1536	1530	431
175°	1590	1586	1584	1592	1585	151
180°	1593	1593	1593	1593	1593	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	462.2	461.8	461.5	461.1	460.7	460.1	459.3	458.5	457.7	456.8	457.4
5°	460.8	460.4	459.9	459.5	459.1	458.4	457.5	456.6	455.8	454.9	455.8
7.5°	456.7	456.4	456.1	455.8	455.6	455.0	454.3	453.7	453.0	452.3	453.3
10°	453.5	453.3	452.9	452.6	452.4	452.0	451.6	451.1	450.7	450.2	451.4
12.5°	448.2	448.3	448.4	448.4	448.4	448.3	448.0	447.6	447.3	447.0	448.2
15°	439.5	439.8	440.1	440.4	440.7	440.9	440.9	440.9	440.9	440.9	442.2
17.5°	428.4	429.0	429.6	430.3	430.9	431.4	431.9	432.3	432.8	433.3	434.6
20°	420.9	421.6	422.4	423.1	423.8	424.5	425.1	425.7	426.3	426.9	428.5
22.5°	412.9	413.8	414.6	415.4	416.3	417.1	418.0	418.8	419.6	420.5	422.1
25°	399.6	400.6	401.6	402.7	403.7	404.9	406.3	407.6	408.9	410.2	412.0
27.5°	383.6	385.3	387.0	388.7	390.3	392.0	393.5	395.1	396.6	398.2	400.5
30°	372.9	374.9	376.7	378.7	380.7	382.5	384.5	386.4	388.3	390.2	392.6
32.5°	361.2	363.4	365.5	367.7	369.9	372.1	374.3	376.7	378.9	381.2	383.9
35°	344.3	346.8	349.4	351.9	354.4	357.0	359.8	362.7	365.4	368.3	371.5
37.5°	325.9	328.9	331.7	334.7	337.5	340.8	344.5	348.0	351.7	355.3	359.0
40°	313.7	316.9	320.2	323.4	326.7	330.3	334.3	338.3	342.3	346.3	350.2
42.5°	301.9	305.2	308.4	311.7	315.0	318.9	323.5	328.1	332.7	337.2	341.4
45°	282.4	286.3	290.3	294.4	298.4	302.9	308.1	313.3	318.5	323.7	328.2
47.5°	263.1	267.4	271.8	276.1	280.4	285.7	291.8	297.8	303.9	310.0	314.8
50°	249.8	254.3	259.0	263.5	268.0	273.7	280.4	287.0	293.7	300.3	305.4
52.5°	236.9	241.7	246.6	251.5	256.3	262.2	269.2	276.2	283.2	290.3	295.3
55°	216.4	221.8	227.1	232.4	237.7	244.2	252.0	259.7	267.3	275.0	280.4
57.5°	196.2	202.2	208.2	214.2	220.3	227.1	235.0	242.8	250.7	258.5	264.3
60°	181.8	188.2	194.6	200.9	207.2	214.6	223.1	231.5	240.0	248.4	254.0
62.5°	169.0	175.6	182.3	188.9	195.5	203.0	211.3	219.8	228.3	236.7	242.6
65°	147.8	155.1	162.4	169.6	176.8	184.9	193.6	202.3	211.1	219.8	225.9
67.5°	128.4	136.0	143.6	151.1	158.7	166.9	175.9	184.9	193.8	202.7	208.8
70°	114.6	122.3	129.9	137.6	145.3	153.7	162.9	172.1	181.3	190.5	196.8
72.5°	101.7	109.7	117.6	125.6	133.5	142.1	151.4	160.7	170.0	179.2	185.6
75°	81.9	90.2	98.4	106.7	115.0	123.9	133.4	142.9	152.4	161.8	168.2
77.5°	62.8	71.4	80.1	88.7	97.5	106.6	116.2	125.8	135.5	145.1	151.4
80°	49.9	58.9	68.0	77.0	86.1	95.4	105.0	114.6	124.2	133.8	140.1
82.5°	39.3	48.2	57.1	66.0	74.9	84.3	94.0	103.7	113.4	123.2	129.4
85°	24.0	33.2	42.4	51.5	60.6	70.0	79.5	88.9	98.4	107.9	114.1
87.5°	13.3	22.8	32.4	41.9	51.5	61.6	72.4	83.2	94.0	104.8	110.7
90°	8.0	20.2	32.4	44.5	56.7	70.8	86.9	102.9	119.0	134.9	140.3
92.5°	30.1	40.7	51.3	61.9	72.5	83.2	93.8	104.5	115.2	125.8	131.8
95°	75.3	85.2	95.1	105.0	115.0	124.8	134.2	143.7	153.1	162.6	168.3
97.5°	132.3	141.2	150.0	158.8	167.6	176.8	186.5	196.2	205.8	215.5	221.0
100°	175.4	183.2	191.1	199.0	206.9	215.3	224.5	233.7	242.9	252.1	257.6
102.5°	220.0	226.9	233.9	240.8	247.7	255.7	264.9	274.1	283.3	292.5	298.1
105°	292.4	297.6	302.7	307.9	313.1	319.9	328.1	336.4	344.7	353.0	358.8
107.5°	365.9	370.6	375.4	380.1	384.9	390.9	398.3	405.6	413.0	420.4	425.6
110°	412.7	417.4	422.2	427.0	431.7	437.7	445.0	452.2	459.4	466.7	471.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	464.3	468.6	472.9	477.2	481.4	486.9	493.6	500.2	506.8	513.5	517.5
115°	540.4	543.8	547.2	550.6	554.1	558.8	564.9	571.0	577.0	583.1	587.2
117.5°	615.5	619.0	622.4	625.9	629.4	633.3	637.8	642.3	646.8	651.3	655.0
120°	666.1	669.1	672.1	675.0	678.1	681.3	684.8	688.3	691.9	695.4	699.5
122.5°	712.3	715.4	718.5	721.7	724.8	728.3	732.1	736.0	739.9	743.8	747.2
125°	783.7	786.4	789.1	791.8	794.5	797.7	801.6	805.4	809.2	813.1	816.2
127.5°	853.9	857.1	860.4	863.6	866.9	870.0	872.6	875.4	878.2	880.9	883.5
130°	898.0	901.7	905.4	909.2	912.9	916.1	918.6	921.0	923.5	926.1	929.1
132.5°	947.4	950.5	953.5	956.5	959.6	962.3	964.8	967.3	969.8	972.3	974.5
135°	1012.9	1016.2	1019.5	1022.8	1026.1	1028.8	1030.8	1032.9	1035.0	1037.1	1039.9
137.5°	1082.5	1085.2	1087.9	1090.6	1093.2	1095.3	1096.7	1098.1	1099.6	1101.0	1103.4
140°	1124.5	1127.0	1129.6	1132.1	1134.7	1136.8	1138.6	1140.4	1142.2	1144.0	1146.4
142.5°	1167.5	1170.1	1172.6	1175.2	1177.7	1179.5	1180.5	1181.6	1182.7	1183.8	1185.9
145°	1228.7	1230.8	1232.9	1234.9	1237.1	1239.0	1240.8	1242.6	1244.4	1246.2	1247.3
147.5°	1283.8	1286.3	1288.8	1291.4	1293.9	1295.7	1296.9	1298.1	1299.3	1300.5	1301.3
150°	1321.4	1323.2	1325.1	1326.9	1328.6	1330.1	1331.3	1332.5	1333.7	1334.9	1335.8
152.5°	1354.8	1356.6	1358.3	1360.1	1362.0	1363.6	1365.0	1366.5	1367.9	1369.3	1370.5
155°	1404.8	1405.7	1406.6	1407.5	1408.4	1409.3	1410.2	1411.0	1411.9	1412.8	1414.3
157.5°	1447.5	1448.1	1448.8	1449.4	1449.9	1450.5	1451.1	1451.6	1452.2	1452.7	1454.6
160°	1473.4	1474.0	1474.5	1475.2	1475.8	1476.2	1476.5	1476.8	1477.1	1477.4	1479.2
162.5°	1497.0	1497.2	1497.3	1497.4	1497.5	1497.7	1498.0	1498.3	1498.6	1498.9	1500.9
165°	1528.5	1528.2	1527.9	1527.6	1527.3	1527.1	1527.1	1527.1	1527.1	1527.1	1529.2
167.5°	1554.8	1553.9	1553.0	1552.1	1551.2	1550.8	1550.7	1550.7	1550.6	1550.5	1552.6
170°	1568.8	1567.9	1567.0	1566.1	1565.2	1564.6	1564.3	1564.1	1563.7	1563.4	1565.5
172.5°	1578.5	1577.6	1576.7	1575.8	1574.9	1574.3	1574.0	1573.7	1573.4	1573.1	1575.2
175°	1590.3	1589.4	1588.5	1587.6	1586.7	1586.0	1585.4	1584.7	1584.2	1583.6	1585.7
177.5°	1595.2	1594.5	1593.8	1593.0	1592.3	1591.7	1591.2	1590.7	1590.3	1589.7	1591.2
180°	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	458.1	458.6	459.2	459.4	459.1	459.0	458.7	458.4
5°	456.6	457.5	458.4	458.8	458.6	458.5	458.3	458.2
7.5°	454.4	455.5	456.6	457.0	456.9	456.7	456.6	456.5
10°	452.5	453.7	455.0	455.5	455.3	455.1	455.0	454.9
12.5°	449.3	450.6	451.7	452.3	452.1	451.9	451.8	451.7
15°	443.5	444.9	446.2	446.7	446.7	446.5	446.3	446.2
17.5°	436.0	437.5	438.8	439.5	439.5	439.5	439.5	439.5
20°	430.2	431.8	433.4	434.2	434.2	434.2	434.2	434.2
22.5°	423.7	425.3	427.0	427.9	428.2	428.4	428.6	428.9
25°	413.8	415.5	417.3	418.5	418.9	419.4	419.8	420.3
27.5°	402.8	405.0	407.2	408.5	408.8	409.2	409.5	409.8
30°	395.0	397.3	399.8	401.1	401.5	402.0	402.4	402.9
32.5°	386.6	389.3	392.1	393.9	394.7	395.5	396.3	397.1
35°	374.8	378.1	381.3	383.4	384.5	385.5	386.6	387.6
37.5°	362.6	366.2	369.8	372.1	373.3	374.3	375.4	376.6
40°	354.0	357.8	361.7	364.3	365.6	366.9	368.3	369.6
42.5°	345.6	349.8	354.0	356.9	358.1	359.4	360.8	362.1
45°	332.9	337.4	342.0	345.0	346.5	348.0	349.5	351.0
47.5°	319.5	324.3	329.1	332.3	333.9	335.6	337.2	338.9
50°	310.4	315.4	320.5	323.8	325.5	327.1	328.7	330.3
52.5°	300.5	305.7	310.9	314.2	316.0	317.8	319.5	321.3
55°	285.7	291.1	296.3	300.0	301.9	303.8	305.8	307.6
57.5°	270.0	275.7	281.5	285.3	287.3	289.3	291.2	293.2
60°	259.7	265.3	270.9	274.7	276.8	278.9	281.0	283.0
62.5°	248.6	254.6	260.6	264.6	266.5	268.5	270.5	272.4
65°	231.9	238.0	244.1	248.1	249.9	251.9	253.8	255.7
67.5°	215.0	221.1	227.2	231.3	233.3	235.3	237.4	239.3
70°	203.2	209.6	215.9	220.0	221.8	223.6	225.3	227.1
72.5°	191.8	198.0	204.3	208.5	210.5	212.7	214.8	217.0
75°	174.6	180.9	187.3	191.5	193.3	195.3	197.2	199.1
77.5°	157.7	164.1	170.4	174.6	176.6	178.7	180.8	182.9
80°	146.3	152.5	158.7	162.8	165.0	167.0	169.1	171.1
82.5°	135.6	141.9	148.0	152.1	154.1	156.0	158.0	160.0
85°	120.3	126.5	132.8	136.9	138.9	141.1	143.1	145.2
87.5°	116.6	122.5	128.4	132.4	134.4	136.3	138.2	140.2
90°	145.6	151.0	156.2	160.0	162.0	164.1	166.1	168.3
92.5°	137.7	143.7	149.5	153.5	155.2	157.1	158.9	160.8
95°	173.9	179.5	185.1	188.5	189.7	190.9	192.1	193.2
97.5°	226.5	231.9	237.4	241.0	242.6	244.3	246.0	247.7
100°	263.1	268.5	274.0	277.4	278.7	280.1	281.4	282.8
102.5°	303.6	309.2	314.9	318.3	319.7	321.0	322.4	323.6
105°	364.5	370.3	376.1	379.9	381.5	383.1	384.7	386.4
107.5°	430.9	436.0	441.3	444.0	444.3	444.5	444.8	445.1
110°	476.2	480.9	485.6	488.4	489.1	489.8	490.5	491.3



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CATALOG NUMBER: S122DIW-S485D1440U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	521.6	525.6	529.6	532.1	533.1	534.0	535.0	536.0
115°	591.4	595.5	599.6	602.1	602.8	603.5	604.2	605.0
117.5°	658.6	662.3	665.9	668.1	668.7	669.3	669.9	670.5
120°	703.6	707.8	711.9	714.4	715.2	715.9	716.6	717.3
122.5°	750.5	753.8	757.1	759.0	759.8	760.5	761.3	762.0
125°	819.3	822.4	825.5	827.6	828.6	829.6	830.6	831.7
127.5°	886.1	888.7	891.3	892.8	893.0	893.4	893.8	894.1
130°	932.0	935.0	937.9	939.4	939.3	939.3	939.3	939.3
132.5°	976.6	978.7	980.9	982.0	982.2	982.5	982.7	982.9
135°	1042.7	1045.5	1048.3	1049.8	1050.2	1050.4	1050.7	1051.0
137.5°	1105.9	1108.4	1110.9	1112.1	1111.9	1111.7	1111.5	1111.3
140°	1148.7	1151.1	1153.4	1154.5	1154.2	1153.9	1153.6	1153.2
142.5°	1188.0	1190.2	1192.3	1193.2	1192.8	1192.3	1191.9	1191.5
145°	1248.6	1249.7	1250.9	1251.2	1250.8	1250.4	1249.9	1249.5
147.5°	1302.1	1302.8	1303.6	1303.6	1302.8	1302.0	1301.3	1300.5
150°	1336.7	1337.6	1338.5	1338.5	1337.6	1336.7	1335.8	1334.9
152.5°	1371.5	1372.7	1373.9	1373.9	1372.7	1371.5	1370.5	1369.3
155°	1415.9	1417.4	1418.8	1419.2	1418.3	1417.4	1416.5	1415.6
157.5°	1456.7	1458.7	1460.8	1461.1	1459.6	1458.2	1456.8	1455.4
160°	1481.0	1482.7	1484.5	1484.9	1483.6	1482.5	1481.3	1480.1
162.5°	1503.0	1505.0	1507.0	1507.3	1505.9	1504.5	1503.1	1501.6
165°	1531.3	1533.4	1535.5	1535.8	1534.3	1532.9	1531.3	1529.8
167.5°	1554.7	1556.8	1558.9	1559.2	1557.6	1556.0	1554.5	1552.9
170°	1567.6	1569.7	1571.8	1571.9	1570.1	1568.3	1566.6	1564.8
172.5°	1577.3	1579.4	1581.4	1581.6	1579.8	1578.1	1576.3	1574.5
175°	1587.8	1589.8	1592.0	1592.1	1590.3	1588.5	1586.7	1584.9
177.5°	1592.7	1594.1	1595.5	1595.5	1594.1	1592.7	1591.2	1589.7
180°	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0

(END OF REPORT)