

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: P331800

Luminaire Tested: **S122RDIW-S485D1240U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331800
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: S122RDIW-S485D1240U835-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1240 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5999.9 lumens
Efficiency: N/A
Efficacy: 111.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

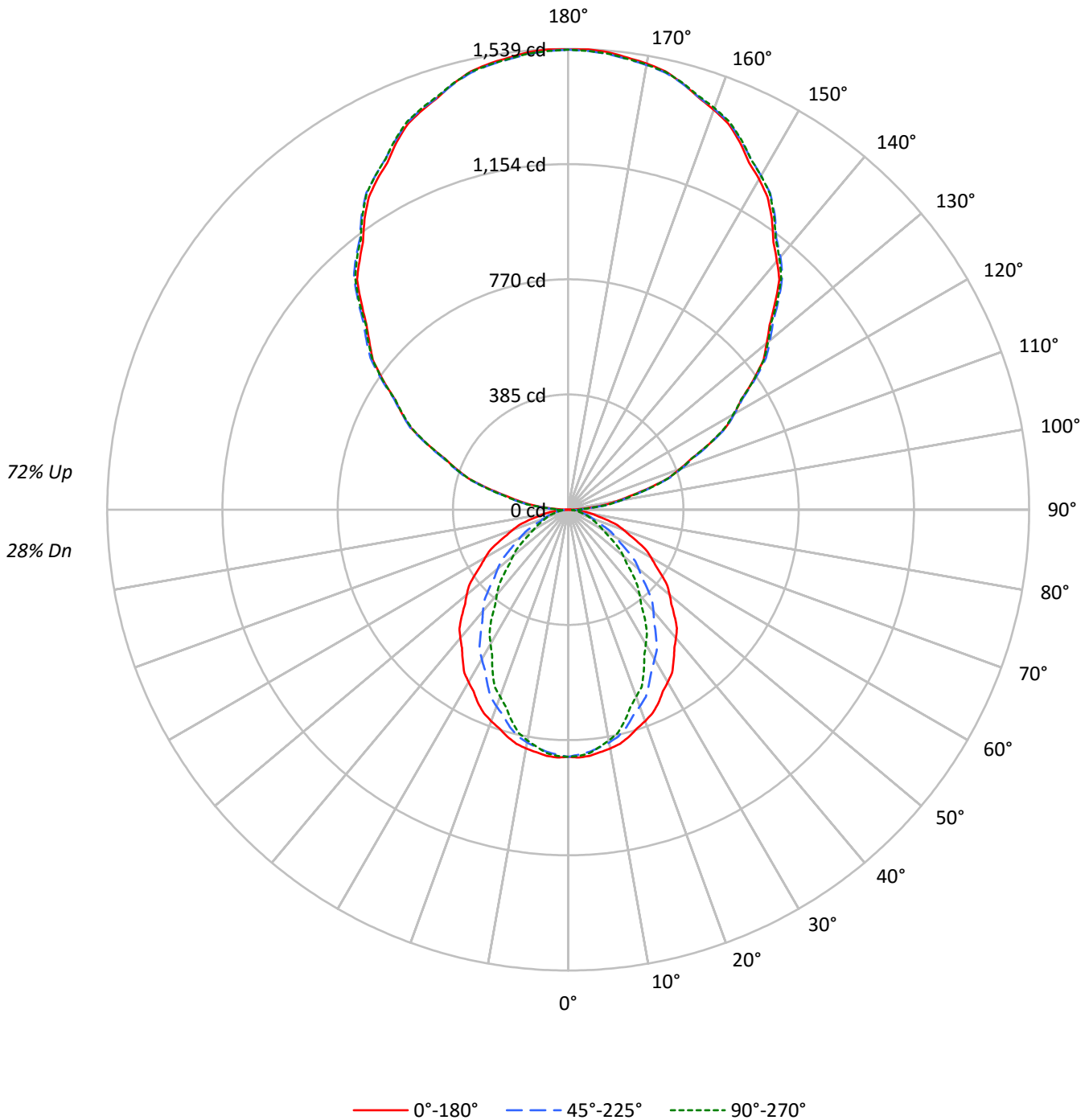
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28				
1	93	89	85	82	83	80	77	74	63	61	59	47	46	45	32	32	31	24				
2	85	78	72	67	76	70	65	61	55	52	49	42	39	38	29	28	27	21				
3	78	69	62	56	69	62	56	51	49	45	42	37	34	32	26	24	23	18				
4	71	61	53	48	63	55	49	44	44	39	36	33	30	28	23	21	20	16				
5	65	54	47	41	58	49	42	37	39	34	31	30	27	24	21	19	17	14				
6	60	49	41	35	54	44	37	33	35	30	27	27	24	21	19	17	16	12				
7	56	44	36	31	50	40	33	29	32	27	24	24	21	19	18	15	14	11				
8	51	40	32	27	46	36	30	25	29	24	21	22	19	17	16	14	12	10				
9	48	36	29	24	43	33	27	22	27	22	19	21	17	15	15	13	11	9				
10	45	33	26	22	40	30	24	20	24	20	17	19	16	13	14	12	10	8				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13324	13324	13324
5°	13374	13157	13230
10°	13273	12942	12832
15°	13120	12558	12197
20°	12909	12010	11407
25°	12693	11389	10644
30°	12392	10750	9663
35°	12100	10054	8803
40°	11805	9335	7807
45°	11460	8526	6907
50°	11105	7709	6021
55°	10742	6832	5171
60°	10320	5909	4292
65°	9845	4963	3908
70°	9272	4088	3597
75°	8571	3724	3356
80°	7569	3329	3059
85°	5947	2631	2631



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.2	1.3
10°-20°	212.1	3.5
20°-30°	297.8	5.0
30°-40°	324.8	5.4
40°-50°	298.6	5.0
50°-60°	234.5	3.9
60°-70°	152.9	2.5
70°-80°	78.8	1.3
80°-90°	26.6	0.4
90°-100°	97.4	1.6
100°-110°	302.4	5.0
110°-120°	516.9	8.6
120°-130°	679.7	11.3
130°-140°	762.9	12.7
140°-150°	748.1	12.5
150°-160°	627.4	10.5
160°-170°	416.2	6.9
170°-180°	145.5	2.4
0°-30°	587.2	9.8
0°-40°	912.0	15.2
0°-60°	1445.1	24.1
0°-90°	1703.5	28.4
90°-120°	916.6	15.3
90°-150°	3107.4	51.8
90°-180°	4296.0	71.6
0°-180°	5999.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	825	825	825	825	825	
5°	825	821	812	818	816	78
15°	785	776	751	738	730	221
25°	712	687	639	610	598	327
35°	614	574	510	465	447	384
45°	502	450	373	322	302	387
55°	382	322	243	200	184	341
65°	258	197	130	106	102	255
75°	137	87	60	55	54	145
85°	32	17	14	14	14	38
90°	1	18	45	43	44	5
95°	67	80	83	83	80	77
105°	279	283	285	288	288	294
115°	519	526	524	522	519	513
125°	755	765	762	759	757	674
135°	976	990	993	992	988	754
145°	1185	1194	1202	1203	1198	740
155°	1355	1359	1363	1369	1365	623
165°	1474	1473	1473	1481	1476	416
175°	1534	1530	1527	1536	1529	146
180°	1536	1536	1536	1536	1536	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2
2.5°	828.2	827.6	826.9	826.2	825.6	824.5	823.1	821.6	820.1	818.7	820.0
5°	825.2	824.4	823.6	822.8	821.9	820.4	818.3	816.1	814.0	811.8	813.3
7.5°	816.7	815.7	814.7	813.6	812.6	810.8	808.3	805.8	803.3	800.8	801.2
10°	809.6	808.4	807.2	806.1	804.9	802.7	799.4	796.0	792.7	789.4	788.9
12.5°	800.6	799.2	797.7	796.3	794.9	792.1	787.8	783.6	779.3	775.1	774.2
15°	784.9	783.1	781.3	779.4	777.6	773.9	768.2	762.6	757.0	751.3	748.2
17.5°	765.7	762.9	760.1	757.3	754.5	749.5	742.3	735.0	727.8	720.5	716.8
20°	751.3	748.0	744.7	741.4	738.0	732.2	723.9	715.6	707.3	699.0	694.9
22.5°	735.8	732.1	728.3	724.6	720.9	714.4	705.0	695.6	686.3	676.9	671.6
25°	712.5	707.2	701.9	696.5	691.2	683.1	672.1	661.2	650.2	639.3	632.5
27.5°	684.4	678.6	672.8	667.1	661.3	652.2	639.9	627.5	615.2	602.8	594.9
30°	664.7	658.4	652.1	645.8	639.5	629.7	616.4	603.1	589.8	576.6	568.1
32.5°	645.6	638.2	630.8	623.5	616.1	605.6	592.1	578.5	565.0	551.5	541.8
35°	613.9	605.4	597.0	588.5	580.0	568.5	553.9	539.3	524.7	510.1	499.6
37.5°	582.2	572.9	563.6	554.3	545.1	532.6	517.1	501.5	485.9	470.4	458.8
40°	560.1	550.2	540.2	530.3	520.3	507.3	491.2	475.1	459.0	442.9	431.1
42.5°	537.4	526.9	516.4	506.0	495.5	481.9	465.3	448.6	432.0	415.4	403.2
45°	501.9	490.8	479.6	468.5	457.4	443.1	425.7	408.3	390.8	373.4	361.6
47.5°	467.2	455.4	443.7	431.9	420.1	405.2	387.2	369.2	351.2	333.2	321.5
50°	442.1	430.3	418.6	406.8	395.0	380.0	361.7	343.5	325.2	306.9	295.5
52.5°	417.6	405.3	393.0	380.7	368.4	353.3	335.4	317.6	299.7	281.9	270.8
55°	381.6	368.7	355.7	342.8	329.9	314.4	296.5	278.6	260.6	242.7	232.8
57.5°	344.7	331.5	318.2	304.9	291.6	276.4	259.2	241.9	224.7	207.5	198.3
60°	319.6	306.4	293.1	279.8	266.5	251.4	234.3	217.2	200.1	183.0	174.5
62.5°	295.1	281.9	268.6	255.3	242.0	227.3	211.0	194.7	178.4	162.1	154.0
65°	257.7	244.2	230.8	217.3	203.9	189.7	174.8	159.8	144.9	129.9	124.3
67.5°	221.5	208.2	194.8	181.5	168.1	154.7	141.3	127.9	114.4	101.0	98.4
70°	196.4	183.5	170.5	157.6	144.6	132.4	121.0	109.5	98.1	86.6	85.0
72.5°	172.5	160.1	147.7	135.3	122.9	112.1	102.9	93.7	84.5	75.3	73.9
75°	137.4	125.8	114.2	102.6	90.9	82.3	76.7	71.0	65.4	59.7	58.6
77.5°	102.9	92.7	82.5	72.3	62.2	55.7	53.0	50.3	47.5	44.8	44.1
80°	81.4	72.9	64.5	56.0	47.5	42.5	40.8	39.2	37.5	35.8	35.2
82.5°	61.7	55.1	48.5	41.9	35.3	31.4	30.3	29.1	28.0	26.9	26.5
85°	32.1	28.6	25.1	21.7	18.2	16.2	15.7	15.2	14.7	14.2	14.2
87.5°	9.8	9.4	9.1	8.7	8.3	8.8	10.1	11.3	12.6	13.9	13.6
90°	1.3	4.8	8.2	11.7	15.1	20.0	26.4	32.7	39.0	45.4	44.8
92.5°	23.1	25.6	28.2	30.7	33.2	35.2	36.7	38.2	39.7	41.2	41.3
95°	67.4	70.3	73.2	76.1	79.0	80.7	81.3	81.8	82.4	83.0	83.0
97.5°	123.2	125.7	128.3	130.8	133.3	135.1	136.2	137.3	138.4	139.5	139.5
100°	164.7	167.0	169.3	171.6	173.9	175.5	176.3	177.2	178.1	178.9	178.9
102.5°	208.2	210.1	211.9	213.8	215.6	217.1	218.2	219.3	220.4	221.5	221.7
105°	278.8	279.6	280.5	281.4	282.2	283.0	283.5	284.1	284.7	285.3	285.8
107.5°	349.8	351.1	352.4	353.6	354.9	355.5	355.5	355.5	355.5	355.5	355.8
110°	395.5	397.2	398.9	400.7	402.4	403.3	403.3	403.3	403.3	403.3	403.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	445.3	447.0	448.7	450.5	452.2	452.9	452.7	452.5	452.2	452.0	451.3
115°	518.7	520.4	522.1	523.8	525.6	526.1	525.6	525.0	524.4	523.8	523.6
117.5°	591.8	594.1	596.4	598.7	601.0	601.4	599.7	598.1	596.5	594.9	594.2
120°	640.5	642.8	645.2	647.5	649.8	649.8	647.5	645.2	642.8	640.5	640.5
122.5°	685.1	687.9	690.7	693.4	696.2	696.8	695.2	693.6	691.9	690.3	689.6
125°	754.6	757.2	759.8	762.4	765.0	765.9	765.0	764.2	763.3	762.4	761.6
127.5°	822.3	825.6	828.9	832.2	835.5	836.6	835.6	834.5	833.5	832.4	831.4
130°	864.9	868.6	872.4	876.1	879.8	881.4	880.9	880.3	879.7	879.1	878.5
132.5°	912.6	915.6	918.7	921.7	924.8	926.4	926.5	926.6	926.7	926.8	925.6
135°	976.4	979.5	982.7	985.9	989.1	990.9	991.5	992.1	992.7	993.2	992.9
137.5°	1043.5	1046.1	1048.7	1051.3	1053.9	1055.6	1056.3	1057.1	1057.8	1058.6	1058.4
140°	1084.0	1086.6	1089.2	1091.8	1094.4	1096.4	1097.8	1099.3	1100.7	1102.1	1102.1
142.5°	1125.5	1128.1	1130.7	1133.3	1135.9	1137.6	1138.6	1139.6	1140.6	1141.6	1141.8
145°	1185.1	1187.2	1189.2	1191.2	1193.2	1195.1	1196.8	1198.5	1200.3	1202.0	1202.3
147.5°	1238.3	1240.7	1243.1	1245.6	1248.0	1249.8	1250.9	1252.1	1253.2	1254.4	1255.0
150°	1274.6	1276.3	1278.1	1279.8	1281.5	1283.0	1284.1	1285.3	1286.4	1287.6	1288.4
152.5°	1306.8	1308.5	1310.2	1311.9	1313.7	1315.2	1316.6	1318.0	1319.4	1320.8	1321.9
155°	1355.0	1355.9	1356.7	1357.6	1358.5	1359.3	1360.2	1361.0	1361.9	1362.8	1364.2
157.5°	1396.2	1396.8	1397.4	1398.0	1398.5	1399.1	1399.6	1400.1	1400.6	1401.2	1403.1
160°	1421.1	1421.7	1422.3	1422.9	1423.4	1423.9	1424.1	1424.4	1424.7	1425.0	1426.7
162.5°	1443.9	1444.1	1444.2	1444.3	1444.4	1444.6	1444.9	1445.2	1445.5	1445.8	1447.7
165°	1474.3	1474.0	1473.7	1473.4	1473.1	1473.0	1473.0	1473.0	1473.0	1473.0	1475.0
167.5°	1499.7	1498.8	1498.0	1497.1	1496.2	1495.8	1495.7	1495.7	1495.6	1495.5	1497.6
170°	1513.2	1512.3	1511.5	1510.6	1509.7	1509.2	1508.9	1508.6	1508.3	1508.0	1510.0
172.5°	1522.5	1521.7	1520.8	1519.9	1519.1	1518.5	1518.2	1517.9	1517.6	1517.3	1519.4
175°	1533.9	1533.1	1532.2	1531.3	1530.5	1529.8	1529.2	1528.6	1528.0	1527.4	1529.5
177.5°	1538.6	1537.9	1537.2	1536.5	1535.8	1535.3	1534.8	1534.3	1533.9	1533.4	1534.8
180°	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2
2.5°	821.3	822.7	824.0	824.5	824.3	824.0	823.7	823.5
5°	814.8	816.3	817.8	818.3	817.8	817.3	816.8	816.3
7.5°	801.6	802.0	802.5	802.3	801.4	800.5	799.7	798.8
10°	788.4	787.9	787.4	786.7	785.7	784.7	783.7	782.7
12.5°	773.3	772.4	771.5	770.2	768.5	766.9	765.2	763.6
15°	745.0	741.9	738.7	736.3	734.6	733.0	731.3	729.7
17.5°	713.0	709.3	705.5	702.2	699.4	696.5	693.7	690.8
20°	690.7	686.6	682.4	678.5	674.9	671.2	667.6	663.9
22.5°	666.2	660.9	655.6	651.5	648.8	646.1	643.4	640.6
25°	625.7	618.9	612.1	607.4	604.9	602.4	600.0	597.5
27.5°	587.0	579.0	571.1	565.2	561.2	557.3	553.3	549.4
30°	559.6	551.2	542.7	536.2	531.7	527.3	522.8	518.3
32.5°	532.1	522.5	512.8	505.9	501.7	497.5	493.2	489.0
35°	489.2	478.7	468.3	461.2	457.6	453.9	450.3	446.6
37.5°	447.3	435.8	424.3	416.4	412.3	408.1	403.9	399.7
40°	419.3	407.5	395.7	387.7	383.4	379.1	374.7	370.4
42.5°	391.0	378.8	366.7	358.5	354.3	350.1	345.9	341.7
45°	349.8	338.1	326.3	318.4	314.4	310.4	306.4	302.5
47.5°	309.8	298.1	286.4	278.7	275.1	271.5	267.8	264.2
50°	284.0	272.6	261.1	253.7	250.2	246.7	243.2	239.7
52.5°	259.7	248.7	237.6	230.5	227.3	224.1	220.8	217.6
55°	222.8	212.8	202.9	196.3	193.2	190.0	186.9	183.7
57.5°	189.2	180.1	171.0	165.1	162.4	159.8	157.1	154.4
60°	166.0	157.6	149.1	143.6	140.9	138.2	135.6	132.9
62.5°	145.9	137.9	129.8	125.0	123.4	121.8	120.2	118.6
65°	118.7	113.0	107.4	104.3	103.8	103.3	102.8	102.3
67.5°	95.8	93.2	90.6	89.1	88.5	88.0	87.5	86.9
70°	83.3	81.7	80.0	78.8	78.2	77.5	76.8	76.2
72.5°	72.5	71.1	69.7	68.8	68.4	68.0	67.6	67.2
75°	57.4	56.3	55.1	54.4	54.3	54.1	53.9	53.8
77.5°	43.5	42.8	42.2	41.7	41.4	41.2	40.9	40.6
80°	34.5	33.9	33.2	32.9	32.9	32.9	32.9	32.9
82.5°	26.1	25.7	25.3	25.1	25.1	25.1	25.1	25.1
85°	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
87.5°	13.4	13.1	12.9	12.8	12.8	12.9	12.9	13.0
90°	44.2	43.7	43.1	42.9	43.2	43.5	43.8	44.1
92.5°	41.5	41.6	41.7	41.8	41.8	41.9	42.0	42.0
95°	83.0	83.0	83.0	82.7	82.1	81.5	81.0	80.4
97.5°	139.5	139.5	139.5	139.5	139.4	139.4	139.3	139.3
100°	178.9	178.9	178.9	178.8	178.5	178.2	177.9	177.6
102.5°	221.9	222.2	222.4	222.4	222.1	221.8	221.5	221.2
105°	286.4	287.0	287.6	287.9	287.9	287.9	287.9	287.9
107.5°	356.0	356.2	356.5	355.9	354.6	353.3	351.9	350.6
110°	403.3	403.3	403.3	402.8	402.0	401.1	400.2	399.4



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CATALOG NUMBER: S122RDIW-S485D1240U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	450.6	449.9	449.2	448.6	447.9	447.3	446.7	446.0
115°	523.3	523.0	522.7	522.1	521.3	520.4	519.5	518.7
117.5°	593.5	592.8	592.1	591.4	590.5	589.6	588.8	587.9
120°	640.5	640.5	640.5	640.1	639.2	638.4	637.5	636.7
122.5°	689.0	688.3	687.6	686.9	686.3	685.6	685.0	684.4
125°	760.7	759.8	759.0	758.4	758.1	757.8	757.5	757.2
127.5°	830.4	829.3	828.3	827.3	826.4	825.5	824.6	823.6
130°	878.0	877.4	876.8	876.0	874.8	873.7	872.5	871.3
132.5°	924.3	923.0	921.8	920.7	919.8	918.8	917.9	917.0
135°	992.7	992.4	992.1	991.5	990.6	989.8	988.9	988.0
137.5°	1058.1	1057.9	1057.7	1057.0	1055.8	1054.7	1053.5	1052.4
140°	1102.1	1102.1	1102.1	1101.6	1100.4	1099.3	1098.1	1097.0
142.5°	1142.0	1142.3	1142.5	1142.0	1140.9	1139.7	1138.6	1137.4
145°	1202.6	1202.9	1203.1	1202.7	1201.6	1200.4	1199.3	1198.1
147.5°	1255.6	1256.3	1256.9	1256.7	1255.6	1254.5	1253.4	1252.3
150°	1289.3	1290.2	1291.0	1291.0	1290.2	1289.3	1288.4	1287.6
152.5°	1323.0	1324.0	1325.1	1325.1	1324.0	1323.0	1321.9	1320.8
155°	1365.7	1367.1	1368.5	1368.8	1368.0	1367.1	1366.2	1365.4
157.5°	1405.1	1407.0	1409.0	1409.3	1407.9	1406.5	1405.1	1403.7
160°	1428.5	1430.2	1431.9	1432.2	1431.1	1429.9	1428.8	1427.6
162.5°	1449.7	1451.6	1453.6	1453.9	1452.5	1451.1	1449.7	1448.4
165°	1477.0	1479.0	1481.1	1481.3	1479.9	1478.5	1477.0	1475.6
167.5°	1499.6	1501.6	1503.6	1503.9	1502.4	1500.9	1499.4	1497.9
170°	1512.0	1514.0	1516.1	1516.2	1514.5	1512.8	1511.0	1509.3
172.5°	1521.4	1523.4	1525.4	1525.5	1523.8	1522.1	1520.4	1518.6
175°	1531.5	1533.5	1535.5	1535.7	1533.9	1532.2	1530.5	1528.7
177.5°	1536.2	1537.6	1538.9	1538.9	1537.6	1536.2	1534.8	1533.4
180°	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5

(END OF REPORT)