

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: P331804

Luminaire Tested: **S122RDIW-S485D1440U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331804  
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-S485D1440U835-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6699.7 lumens  
Efficiency: N/A  
Efficacy: 110.6 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

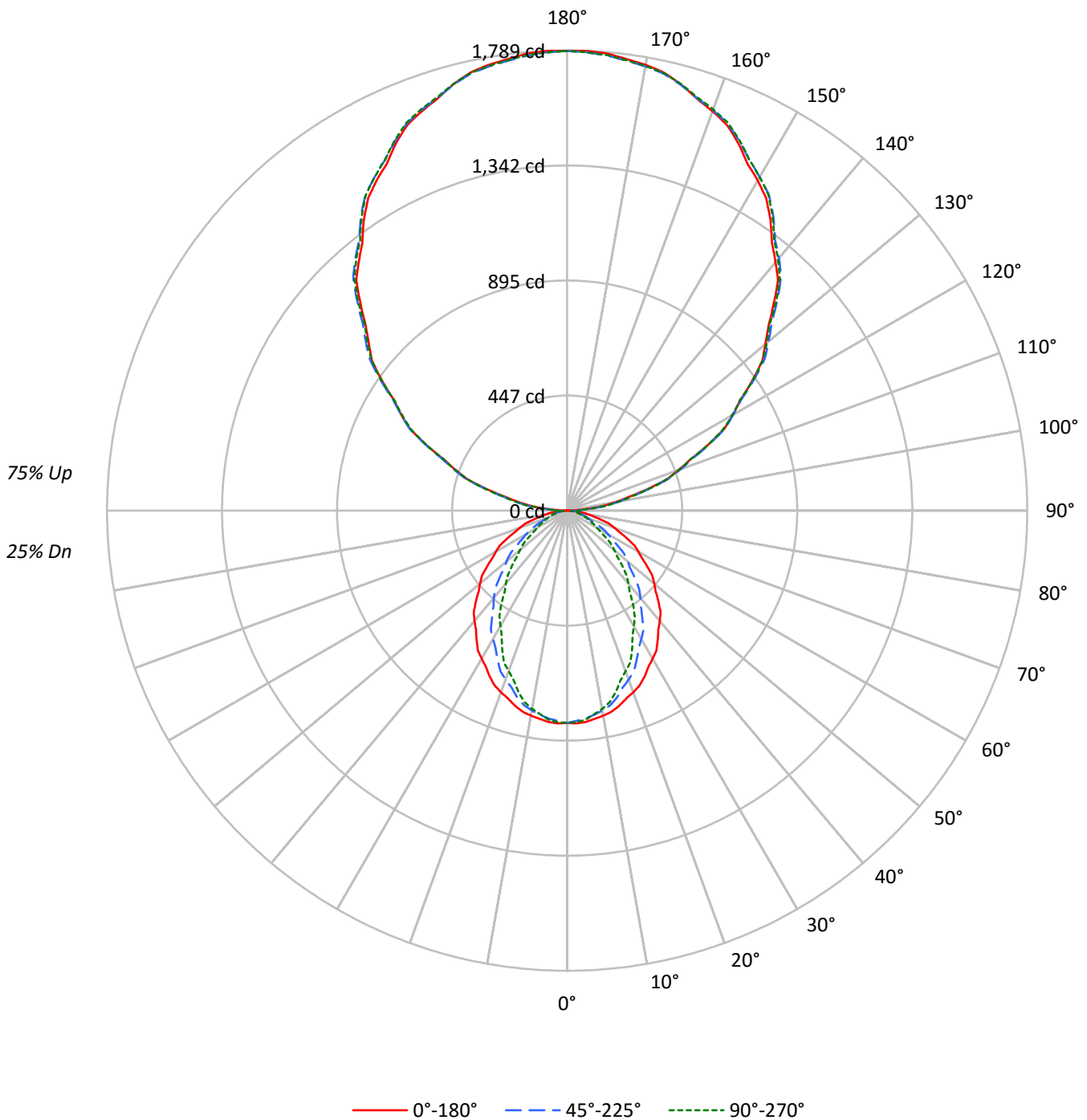
Input Watts (W): 60.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	25				
1	92	88	85	81	82	79	76	73	61	59	57	45	44	43	30	29	29	22				
2	84	77	72	67	75	69	64	60	54	51	48	40	38	36	27	26	25	19				
3	77	68	61	56	68	61	55	51	48	44	40	35	33	31	24	22	21	16				
4	71	60	53	47	63	54	48	43	42	38	35	32	29	26	21	20	18	14				
5	65	54	46	40	57	48	42	37	38	33	30	28	25	23	19	18	16	12				
6	60	48	40	35	53	43	37	32	34	29	26	26	22	20	18	16	14	11				
7	55	43	36	31	49	39	33	28	31	26	23	23	20	18	16	14	13	10				
8	51	39	32	27	45	35	29	25	28	24	20	21	18	16	15	13	11	9				
9	47	36	29	24	42	32	26	22	26	21	18	20	16	14	14	12	10	8				
10	44	33	26	21	39	30	24	20	24	19	16	18	15	13	13	11	9	7				

**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	1.2
10°-20°	212.1	3.2
20°-30°	297.8	4.4
30°-40°	324.8	4.8
40°-50°	298.6	4.5
50°-60°	234.5	3.5
60°-70°	152.9	2.3
70°-80°	78.8	1.2
80°-90°	27.6	0.4
90°-100°	113.2	1.7
100°-110°	351.6	5.2
110°-120°	601.0	9.0
120°-130°	790.3	11.8
130°-140°	887.0	13.2
140°-150°	869.7	13.0
150°-160°	729.5	10.9
160°-170°	483.8	7.2
170°-180°	169.1	2.5
0°-30°	587.2	8.8
0°-40°	912.0	13.6
0°-60°	1445.1	21.6
0°-90°	1704.5	25.4
90°-120°	1065.7	15.9
90°-150°	3612.8	53.9
90°-180°	4995.0	74.6
0°-180°	6699.7	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°	2	20	53	50	51	5
95°	78	93	96	96	94	90
105°	324	329	332	334	335	342
115°	603	611	609	607	603	596
125°	877	890	886	882	880	784
135°	1135	1151	1155	1153	1149	877
145°	1378	1388	1398	1399	1393	860
155°	1575	1580	1584	1591	1588	725
165°	1714	1713	1713	1722	1716	483
175°	1783	1779	1776	1785	1777	169
180°	1786	1786	1786	1786	1786	



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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°	9.9	9.6	9.3	9.1	8.8	9.4	10.9	12.4	13.9	15.3	15.1
90°	1.5	5.5	9.5	13.6	17.6	23.3	30.7	38.0	45.4	52.8	52.1
92.5°	26.8	29.8	32.7	35.7	38.6	41.0	42.7	44.5	46.2	47.9	48.1
95°	78.4	81.7	85.1	88.4	91.8	93.8	94.5	95.1	95.8	96.5	96.5
97.5°	143.2	146.2	149.1	152.1	155.0	157.1	158.4	159.7	160.9	162.2	162.2
100°	191.5	194.1	196.8	199.5	202.2	204.0	205.0	206.0	207.0	208.0	208.0
102.5°	242.1	244.3	246.4	248.5	250.7	252.4	253.7	254.9	256.2	257.5	257.8
105°	324.1	325.1	326.1	327.1	328.1	329.0	329.7	330.3	331.0	331.7	332.3
107.5°	406.7	408.2	409.7	411.2	412.6	413.4	413.4	413.4	413.4	413.4	413.6
110°	459.8	461.8	463.8	465.8	467.8	468.9	468.9	468.9	468.9	468.9	468.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	517.7	519.7	521.7	523.7	525.7	526.6	526.3	526.1	525.8	525.5	524.7
115°	603.0	605.0	607.0	609.1	611.1	611.7	611.1	610.4	609.7	609.1	608.7
117.5°	688.1	690.7	693.4	696.1	698.8	699.2	697.3	695.4	693.5	691.7	690.9
120°	744.7	747.4	750.1	752.8	755.5	755.5	752.8	750.1	747.4	744.7	744.7
122.5°	796.6	799.8	803.0	806.2	809.5	810.1	808.3	806.4	804.5	802.6	801.8
125°	877.4	880.4	883.4	886.4	889.5	890.5	889.5	888.5	887.5	886.4	885.4
127.5°	956.1	959.9	963.7	967.6	971.4	972.7	971.5	970.3	969.1	967.9	966.6
130°	1005.5	1009.9	1014.3	1018.6	1023.0	1024.8	1024.1	1023.5	1022.8	1022.1	1021.5
132.5°	1061.0	1064.6	1068.1	1071.7	1075.2	1077.1	1077.2	1077.3	1077.5	1077.6	1076.1
135°	1135.2	1138.9	1142.6	1146.2	1149.9	1152.1	1152.8	1153.5	1154.1	1154.8	1154.5
137.5°	1213.3	1216.3	1219.3	1222.3	1225.3	1227.3	1228.2	1229.0	1229.9	1230.8	1230.5
140°	1260.3	1263.3	1266.4	1269.4	1272.4	1274.7	1276.4	1278.1	1279.8	1281.4	1281.4
142.5°	1308.6	1311.6	1314.6	1317.6	1320.6	1322.7	1323.8	1325.0	1326.1	1327.3	1327.5
145°	1377.9	1380.3	1382.6	1384.9	1387.3	1389.5	1391.5	1393.5	1395.5	1397.5	1397.8
147.5°	1439.7	1442.5	1445.3	1448.2	1451.0	1453.1	1454.4	1455.7	1457.1	1458.4	1459.2
150°	1481.9	1483.9	1486.0	1488.0	1490.0	1491.6	1493.0	1494.3	1495.7	1497.0	1498.0
152.5°	1519.3	1521.3	1523.3	1525.3	1527.4	1529.2	1530.8	1532.4	1534.0	1535.6	1536.9
155°	1575.4	1576.4	1577.4	1578.4	1579.4	1580.4	1581.4	1582.4	1583.4	1584.4	1586.1
157.5°	1623.3	1624.0	1624.7	1625.4	1626.0	1626.7	1627.3	1627.9	1628.5	1629.1	1631.3
160°	1652.3	1653.0	1653.6	1654.3	1655.0	1655.5	1655.8	1656.1	1656.5	1656.8	1658.8
162.5°	1678.8	1679.0	1679.1	1679.2	1679.4	1679.6	1679.9	1680.3	1680.6	1680.9	1683.2
165°	1714.1	1713.8	1713.4	1713.1	1712.8	1712.6	1712.6	1712.6	1712.6	1712.6	1714.9
167.5°	1743.6	1742.6	1741.6	1740.6	1739.6	1739.1	1739.0	1739.0	1738.9	1738.8	1741.2
170°	1759.3	1758.3	1757.3	1756.3	1755.3	1754.6	1754.3	1754.0	1753.6	1753.3	1755.6
172.5°	1770.2	1769.2	1768.2	1767.2	1766.2	1765.5	1765.2	1764.8	1764.5	1764.1	1766.5
175°	1783.4	1782.4	1781.4	1780.4	1779.4	1778.6	1777.9	1777.2	1776.6	1775.9	1778.3
177.5°	1788.9	1788.1	1787.3	1786.5	1785.7	1785.0	1784.4	1783.9	1783.4	1782.8	1784.4
180°	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5



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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°	14.8	14.5	14.3	14.2	14.2	14.3	14.4	14.4
90°	51.4	50.8	50.1	49.9	50.3	50.6	50.9	51.3
92.5°	48.2	48.3	48.5	48.6	48.6	48.7	48.8	48.8
95°	96.5	96.5	96.5	96.1	95.5	94.8	94.1	93.5
97.5°	162.2	162.2	162.2	162.2	162.1	162.0	162.0	161.9
100°	208.0	208.0	208.0	207.9	207.5	207.2	206.9	206.5
102.5°	258.0	258.3	258.6	258.5	258.2	257.9	257.5	257.2
105°	333.0	333.7	334.3	334.7	334.7	334.7	334.7	334.7
107.5°	413.9	414.2	414.4	413.8	412.3	410.7	409.2	407.6
110°	468.9	468.9	468.9	468.3	467.3	466.3	465.3	464.3





TEST NUMBER: P331804

CATALOG NUMBER: S122RDIW-S485D1440U835-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	523.9	523.1	522.3	521.5	520.8	520.1	519.3	518.6
115°	608.4	608.0	607.7	607.0	606.0	605.0	604.0	603.0
117.5°	690.1	689.3	688.5	687.5	686.5	685.5	684.5	683.5
120°	744.7	744.7	744.7	744.2	743.2	742.2	741.2	740.2
122.5°	801.0	800.2	799.4	798.6	797.9	797.2	796.4	795.7
125°	884.4	883.4	882.4	881.8	881.4	881.1	880.8	880.4
127.5°	965.4	964.2	963.0	961.9	960.8	959.7	958.7	957.6
130°	1020.8	1020.1	1019.4	1018.4	1017.1	1015.8	1014.4	1013.1
132.5°	1074.7	1073.2	1071.7	1070.4	1069.4	1068.3	1067.2	1066.1
135°	1154.1	1153.8	1153.5	1152.8	1151.8	1150.8	1149.8	1148.8
137.5°	1230.2	1230.0	1229.7	1228.9	1227.6	1226.2	1224.9	1223.5
140°	1281.4	1281.4	1281.4	1280.8	1279.4	1278.1	1276.7	1275.4
142.5°	1327.8	1328.1	1328.3	1327.8	1326.5	1325.1	1323.8	1322.4
145°	1398.2	1398.5	1398.8	1398.3	1397.0	1395.7	1394.3	1393.0
147.5°	1459.9	1460.6	1461.4	1461.1	1459.8	1458.5	1457.3	1456.0
150°	1499.0	1500.0	1501.0	1501.0	1500.0	1499.0	1498.0	1497.0
152.5°	1538.1	1539.4	1540.7	1540.7	1539.4	1538.1	1536.9	1535.6
155°	1587.8	1589.5	1591.1	1591.5	1590.5	1589.5	1588.5	1587.5
157.5°	1633.6	1635.9	1638.2	1638.5	1636.9	1635.3	1633.7	1632.1
160°	1660.8	1662.8	1664.8	1665.2	1663.8	1662.5	1661.2	1659.8
162.5°	1685.5	1687.8	1690.0	1690.4	1688.8	1687.2	1685.6	1683.9
165°	1717.3	1719.6	1722.0	1722.3	1720.6	1719.0	1717.3	1715.6
167.5°	1743.5	1745.9	1748.2	1748.5	1746.8	1745.0	1743.3	1741.5
170°	1758.0	1760.3	1762.7	1762.8	1760.8	1758.8	1756.8	1754.8
172.5°	1768.8	1771.2	1773.5	1773.7	1771.7	1769.7	1767.7	1765.7
175°	1780.6	1782.9	1785.3	1785.5	1783.4	1781.4	1779.4	1777.4
177.5°	1786.1	1787.7	1789.3	1789.3	1787.7	1786.1	1784.4	1782.8
180°	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5

(END OF REPORT)