

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: P331847-830

Luminaire Tested: **S122RDIW-S1005D435U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331847-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S1005D435U830-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 435 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4915.8 lumens
Efficiency: N/A
Efficacy: 93.8 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-Direct

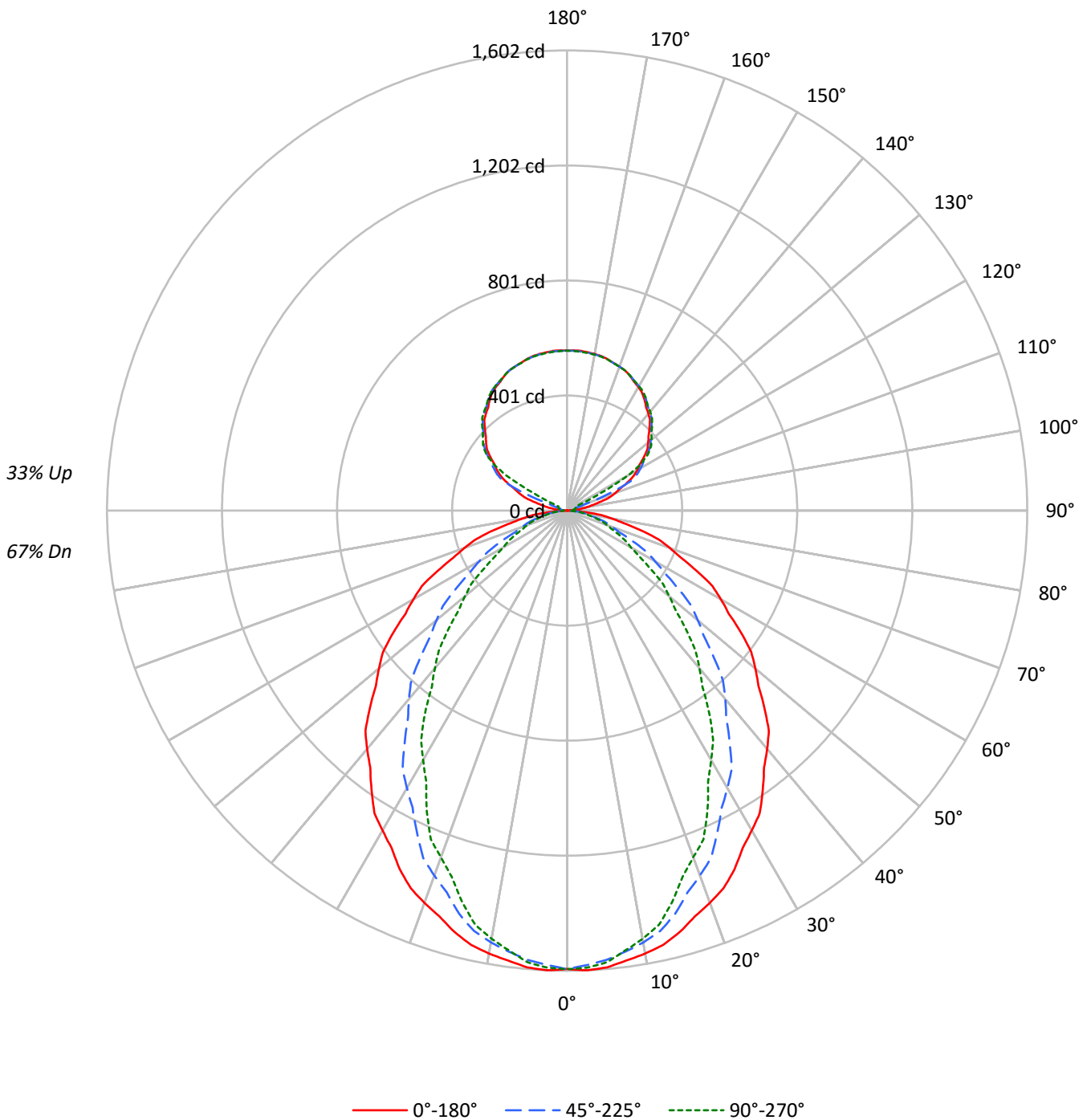
Input Watts (W): 52.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	102	98	94	91	96	93	89	86	82	80	78	73	71	69	64	63	62	58
2	94	86	80	75	88	82	76	72	73	69	65	65	62	59	57	55	53	49
3	86	77	69	64	81	72	66	61	65	60	56	58	54	51	51	48	46	42
4	79	68	60	54	74	65	58	52	58	53	48	52	48	44	46	43	40	37
5	73	61	53	47	68	58	51	45	52	47	42	47	42	39	42	38	35	33
6	67	55	47	41	63	53	45	40	48	42	37	43	38	34	38	35	31	29
7	62	50	42	37	59	48	41	36	43	37	33	39	34	31	35	31	28	26
8	58	46	38	33	55	44	37	32	40	34	30	36	31	28	33	29	26	23
9	54	42	35	30	51	40	33	29	37	31	27	33	29	25	30	26	23	21
10	51	39	32	27	48	37	31	26	34	28	24	31	26	23	28	24	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25770	25770	25770
5°	25869	25449	25590
10°	25671	25032	24819
15°	25377	24289	23590
20°	24967	23230	22063
25°	24549	22026	20587
30°	23968	20789	18690
35°	23402	19446	17026
40°	22835	18054	15099
45°	22165	16493	13358
50°	21481	14913	11645
55°	20777	13216	10001
60°	19963	11428	8302
65°	19037	9605	7561
70°	17934	7912	6954
75°	16581	7211	6488
80°	14635	6453	5904
85°	11504	5076	5076



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.4	3.0
10°-20°	410.2	8.3
20°-30°	576.1	11.7
30°-40°	628.2	12.8
40°-50°	577.6	11.7
50°-60°	453.6	9.2
60°-70°	295.8	6.0
70°-80°	152.5	3.1
80°-90°	40.9	0.8
90°-100°	18.6	0.4
100°-110°	68.1	1.4
110°-120°	182.0	3.7
120°-130°	300.5	6.1
130°-140°	319.6	6.5
140°-150°	297.0	6.0
150°-160°	238.8	4.9
160°-170°	153.9	3.1
170°-180°	53.0	1.1
0°-30°	1135.7	23.1
0°-40°	1763.9	35.9
0°-60°	2795.1	56.9
0°-90°	3284.2	66.8
90°-120°	268.7	5.5
90°-150°	1185.9	24.1
90°-180°	1632.0	33.2
0°-180°	4915.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1596	1596	1596	1596	1596	
5°	1596	1588	1570	1582	1579	151
15°	1518	1500	1453	1426	1411	427
25°	1378	1329	1236	1179	1156	633
35°	1187	1111	987	899	864	743
45°	971	871	722	623	585	749
55°	738	623	470	386	355	659
65°	498	381	251	205	198	494
75°	266	168	116	106	104	281
85°	62	33	27	27	27	73
90°	0	5	8	10	11	4
95°	26	14	16	18	17	32
105°	122	128	25	29	31	131
115°	232	239	248	71	33	228
125°	328	333	340	343	344	292
135°	405	412	415	419	419	313
145°	470	470	476	479	477	294
155°	518	514	519	521	518	238
165°	545	543	544	547	544	154
175°	558	555	556	558	555	53
180°	557	557	557	557	557	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1
2.5°	1601.9	1600.6	1599.3	1598.1	1596.8	1594.7	1591.9	1589.1	1586.3	1583.5	1586.0
5°	1596.1	1594.5	1592.9	1591.3	1589.7	1586.9	1582.6	1578.5	1574.3	1570.2	1573.0
7.5°	1579.7	1577.7	1575.7	1573.7	1571.7	1568.3	1563.4	1558.5	1553.7	1548.8	1549.6
10°	1565.8	1563.6	1561.3	1559.1	1556.8	1552.5	1546.1	1539.6	1533.2	1526.8	1525.9
12.5°	1548.5	1545.7	1542.9	1540.2	1537.5	1531.9	1523.7	1515.5	1507.3	1499.1	1497.3
15°	1518.2	1514.6	1511.1	1507.5	1504.0	1496.8	1485.9	1475.0	1464.1	1453.1	1447.1
17.5°	1480.8	1475.5	1470.1	1464.7	1459.3	1449.6	1435.6	1421.6	1407.6	1393.6	1386.4
20°	1453.1	1446.7	1440.3	1433.9	1427.5	1416.3	1400.1	1384.1	1368.1	1352.0	1344.0
22.5°	1423.1	1415.9	1408.7	1401.6	1394.3	1381.7	1363.6	1345.5	1327.4	1309.3	1298.9
25°	1378.0	1367.7	1357.4	1347.2	1336.9	1321.3	1300.0	1278.8	1257.6	1236.4	1223.3
27.5°	1323.7	1312.6	1301.4	1290.2	1279.0	1261.5	1237.7	1213.7	1189.9	1166.0	1150.7
30°	1285.6	1273.4	1261.2	1249.0	1236.8	1217.9	1192.1	1166.5	1140.9	1115.1	1098.7
32.5°	1248.6	1234.4	1220.1	1205.9	1191.6	1171.4	1145.2	1119.0	1092.8	1066.6	1047.9
35°	1187.3	1171.0	1154.6	1138.2	1121.9	1099.6	1071.3	1043.1	1014.8	986.6	966.4
37.5°	1126.1	1108.1	1090.1	1072.1	1054.2	1030.2	1000.0	970.0	939.8	909.7	887.5
40°	1083.4	1064.1	1044.8	1025.6	1006.4	981.1	950.0	918.9	887.7	856.6	833.8
42.5°	1039.4	1019.2	998.9	978.5	958.3	932.1	899.9	867.7	835.6	803.4	779.9
45°	970.7	949.1	927.7	906.2	884.7	857.1	823.3	789.7	755.9	722.3	699.5
47.5°	903.6	880.9	858.1	835.3	812.5	783.7	748.9	714.1	679.3	644.5	621.9
50°	855.2	832.4	809.5	786.7	763.9	734.9	699.6	664.3	629.0	593.7	571.6
52.5°	807.8	783.9	760.2	736.3	712.5	683.3	648.8	614.3	579.7	545.2	523.8
55°	738.1	713.1	688.1	663.0	638.0	608.1	573.4	538.8	504.2	469.5	450.2
57.5°	666.8	641.1	615.4	589.7	564.0	534.5	501.2	467.9	434.6	401.2	383.6
60°	618.2	592.6	566.8	541.2	515.5	486.2	453.1	420.0	386.9	353.9	337.5
62.5°	570.9	545.2	519.5	493.8	468.2	439.5	408.0	376.5	345.0	313.5	297.8
65°	498.3	472.3	446.4	420.4	394.4	366.9	338.0	309.2	280.2	251.4	240.4
67.5°	428.4	402.7	376.8	351.0	325.2	299.3	273.3	247.3	221.3	195.3	190.3
70°	379.9	354.9	329.8	304.8	279.7	256.2	234.0	211.9	189.7	167.6	164.4
72.5°	333.7	309.6	285.7	261.6	237.6	216.7	199.0	181.2	163.3	145.6	142.9
75°	265.8	243.3	220.8	198.4	175.9	159.2	148.3	137.4	126.5	115.6	113.3
77.5°	199.1	179.4	159.7	140.0	120.2	107.7	102.5	97.2	91.9	86.7	85.4
80°	157.4	141.1	124.7	108.3	92.0	82.2	79.0	75.8	72.6	69.4	68.1
82.5°	119.3	106.5	93.8	81.0	68.2	60.7	58.5	56.4	54.2	52.0	51.3
85°	62.1	55.3	48.6	41.8	35.2	31.3	30.3	29.4	28.4	27.4	27.4
87.5°	18.6	16.7	14.9	13.0	11.1	10.3	10.5	10.6	10.7	10.8	10.7
90°	0.4	1.4	2.4	3.4	4.3	5.2	5.9	6.6	7.4	8.0	8.5
92.5°	8.1	8.0	7.9	7.8	7.8	7.9	8.3	8.7	9.0	9.3	9.6
95°	26.2	23.2	20.3	17.3	14.3	13.2	13.9	14.4	15.1	15.7	16.1
97.5°	51.9	43.6	35.3	27.0	18.7	15.3	16.7	18.1	19.6	21.0	21.4
100°	71.4	59.0	46.8	34.5	22.2	16.9	18.4	19.9	21.4	23.0	23.7
102.5°	92.6	90.0	87.4	84.8	82.2	74.6	61.8	49.1	36.4	23.6	24.5
105°	122.4	125.2	127.8	130.5	133.2	122.3	97.9	73.4	49.0	24.6	25.5
107.5°	156.6	158.7	160.9	163.1	165.2	151.7	122.3	93.0	63.7	34.4	33.4
110°	178.4	180.3	182.2	184.1	186.0	174.0	148.1	122.2	96.3	70.5	61.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	199.1	200.8	202.5	204.1	205.8	203.4	197.0	190.6	184.2	177.9	145.2
115°	231.7	233.2	234.7	236.2	237.7	239.6	241.9	244.1	246.3	248.5	207.1
117.5°	260.7	262.4	264.1	265.8	267.5	269.2	270.7	272.2	273.8	275.3	265.3
120°	282.0	283.3	284.6	286.1	287.4	288.9	290.5	292.1	293.7	295.3	296.3
122.5°	300.0	301.4	302.8	304.3	305.7	307.3	309.1	310.8	312.5	314.3	315.0
125°	327.5	328.7	329.9	331.0	332.2	333.6	335.4	337.1	338.7	340.4	341.0
127.5°	352.4	353.7	355.0	356.3	357.6	358.8	360.1	361.4	362.7	363.9	364.9
130°	368.3	369.7	371.1	372.5	373.9	375.1	376.2	377.1	378.1	379.1	380.0
132.5°	384.4	385.5	386.7	388.0	389.2	390.3	391.2	392.3	393.2	394.3	395.1
135°	405.3	406.7	408.1	409.5	411.0	412.1	412.9	413.8	414.5	415.4	416.2
137.5°	426.5	427.4	428.5	429.5	430.5	431.4	432.3	433.3	434.1	435.1	435.9
140°	440.4	441.0	441.8	442.4	443.2	444.0	445.1	446.0	447.0	448.0	448.7
142.5°	451.9	452.6	453.2	453.8	454.5	455.4	456.5	457.6	458.7	459.9	460.6
145°	470.1	470.0	470.0	469.9	469.8	470.5	472.0	473.5	475.0	476.5	477.2
147.5°	486.0	485.7	485.3	485.0	484.7	485.2	486.7	488.2	489.7	491.3	491.7
150°	496.3	495.7	495.0	494.5	493.8	494.2	495.7	497.1	498.5	499.9	500.5
152.5°	505.0	504.4	503.6	502.9	502.2	502.6	503.9	505.3	506.6	508.0	508.5
155°	517.6	516.9	516.0	515.3	514.4	514.6	515.7	516.7	517.8	518.9	519.4
157.5°	527.5	526.9	526.2	525.6	524.9	524.9	525.7	526.4	527.2	527.9	528.5
160°	533.4	532.8	532.3	531.8	531.2	531.2	531.8	532.3	532.8	533.4	534.0
162.5°	538.6	538.0	537.4	537.0	536.4	536.4	536.8	537.2	537.7	538.2	538.9
165°	545.4	545.0	544.4	543.8	543.3	543.2	543.5	543.8	544.0	544.2	544.9
167.5°	550.6	550.1	549.6	549.0	548.5	548.4	548.6	548.8	549.1	549.3	550.0
170°	553.6	553.0	552.4	552.0	551.4	551.2	551.4	551.6	551.8	552.0	552.5
172.5°	555.4	555.0	554.4	553.8	553.3	553.2	553.3	553.5	553.6	553.8	554.5
175°	558.0	557.3	556.7	556.1	555.4	555.3	555.4	555.6	555.7	555.9	556.6
177.5°	558.4	557.9	557.3	556.9	556.4	556.1	556.2	556.3	556.4	556.4	556.9
180°	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1
2.5°	1588.6	1591.1	1593.7	1594.7	1594.2	1593.7	1593.2	1592.7
5°	1575.9	1578.9	1581.7	1582.6	1581.7	1580.7	1579.8	1578.9
7.5°	1550.4	1551.2	1552.1	1551.7	1550.0	1548.3	1546.7	1545.0
10°	1524.8	1523.9	1523.0	1521.5	1519.6	1517.7	1515.7	1513.8
12.5°	1495.6	1493.8	1492.1	1489.7	1486.5	1483.3	1480.1	1476.9
15°	1441.0	1434.8	1428.7	1424.1	1420.9	1417.7	1414.5	1411.3
17.5°	1379.1	1371.9	1364.6	1358.2	1352.7	1347.2	1341.6	1336.1
20°	1336.0	1327.9	1319.9	1312.4	1305.3	1298.3	1291.2	1284.1
22.5°	1288.6	1278.3	1267.9	1260.1	1254.9	1249.6	1244.3	1239.1
25°	1210.1	1197.0	1183.8	1174.9	1170.0	1165.2	1160.4	1155.6
27.5°	1135.3	1119.9	1104.6	1093.1	1085.4	1077.8	1070.2	1062.5
30°	1082.4	1066.0	1049.6	1037.2	1028.5	1019.8	1011.2	1002.5
32.5°	1029.3	1010.6	991.8	978.5	970.3	962.1	953.9	945.8
35°	946.1	926.0	905.7	892.0	885.0	877.9	870.8	863.8
37.5°	865.2	842.9	820.6	805.4	797.4	789.3	781.2	773.1
40°	811.0	788.2	765.4	749.9	741.5	733.1	724.8	716.4
42.5°	756.3	732.7	709.2	693.3	685.2	677.1	669.1	661.0
45°	676.7	653.8	631.0	615.9	608.1	600.4	592.7	585.0
47.5°	599.2	576.6	553.8	539.0	532.1	525.1	518.0	511.0
50°	549.4	527.3	505.1	490.6	483.9	477.1	470.4	463.6
52.5°	502.4	481.0	459.7	445.8	439.6	433.4	427.2	420.9
55°	430.9	411.7	392.4	379.8	373.6	367.5	361.5	355.3
57.5°	366.0	348.3	330.6	319.2	314.1	309.0	303.9	298.7
60°	321.1	304.8	288.4	277.7	272.5	267.4	262.2	257.1
62.5°	282.3	266.6	251.1	241.7	238.7	235.5	232.4	229.4
65°	229.5	218.6	207.6	201.7	200.8	199.8	198.9	197.9
67.5°	185.3	180.3	175.2	172.2	171.3	170.2	169.2	168.1
70°	161.2	158.0	154.8	152.5	151.2	149.9	148.6	147.3
72.5°	140.3	137.5	134.8	133.1	132.3	131.6	130.7	130.0
75°	111.0	108.9	106.6	105.3	105.0	104.6	104.3	104.0
77.5°	84.1	82.8	81.5	80.6	80.1	79.6	79.1	78.6
80°	66.7	65.5	64.2	63.5	63.5	63.5	63.5	63.5
82.5°	50.4	49.7	48.9	48.5	48.5	48.5	48.5	48.5
85°	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4
87.5°	10.6	10.4	10.2	10.1	10.2	10.2	10.3	10.3
90°	9.0	9.4	9.8	10.2	10.4	10.6	10.7	10.8
92.5°	9.8	10.1	10.3	10.5	10.6	10.7	10.7	10.8
95°	16.6	17.1	17.5	17.7	17.6	17.5	17.4	17.3
97.5°	21.8	22.1	22.4	22.7	22.8	22.9	23.0	23.1
100°	24.4	25.1	25.8	26.3	26.5	26.7	26.8	27.0
102.5°	25.4	26.4	27.3	27.9	28.2	28.5	28.7	28.9
105°	26.6	27.5	28.6	29.2	29.5	29.9	30.3	30.6
107.5°	32.4	31.4	30.3	30.1	30.4	30.8	31.1	31.5
110°	52.6	43.6	34.7	30.3	30.7	31.1	31.5	31.9



TEST NUMBER: P331847-830

CATALOG NUMBER: S122RDIW-S1005D435U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	112.5	79.8	47.2	31.0	31.3	31.6	31.9	32.1
115°	165.7	124.2	82.8	58.8	52.4	45.9	39.5	33.0
117.5°	255.2	245.2	235.2	219.6	198.4	177.2	156.1	134.9
120°	297.5	298.5	299.6	294.1	282.0	269.9	257.8	245.7
122.5°	315.6	316.2	316.9	316.0	313.7	311.3	309.0	306.6
125°	341.7	342.3	342.9	343.4	343.7	343.9	344.2	344.4
127.5°	365.8	366.6	367.6	368.1	368.2	368.2	368.3	368.3
130°	381.1	382.0	383.0	383.5	383.4	383.3	383.2	383.1
132.5°	396.0	396.7	397.6	397.9	397.8	397.8	397.8	397.7
135°	417.2	418.0	419.0	419.2	419.1	419.0	418.8	418.6
137.5°	436.9	437.7	438.6	438.8	438.6	438.3	438.0	437.6
140°	449.6	450.4	451.2	451.4	450.9	450.4	450.1	449.6
142.5°	461.4	462.1	462.9	463.0	462.5	462.1	461.7	461.2
145°	477.9	478.4	479.1	479.2	478.7	478.2	477.9	477.4
147.5°	492.2	492.7	493.1	493.1	492.8	492.4	492.0	491.6
150°	501.1	501.5	502.1	502.2	501.7	501.2	500.8	500.4
152.5°	509.1	509.6	510.2	510.1	509.5	509.0	508.3	507.7
155°	520.0	520.5	521.0	520.9	520.2	519.5	518.8	518.1
157.5°	529.1	529.7	530.4	530.3	529.6	528.9	528.2	527.5
160°	534.4	535.0	535.6	535.5	534.9	534.2	533.6	533.0
162.5°	539.4	540.1	540.6	540.5	539.8	539.0	538.3	537.5
165°	545.5	546.1	546.8	546.8	546.1	545.5	544.9	544.2
167.5°	550.6	551.2	551.9	551.8	550.9	550.2	549.3	548.6
170°	553.2	553.8	554.4	554.3	553.6	552.7	552.0	551.1
172.5°	555.1	555.7	556.4	556.3	555.4	554.7	553.8	553.1
175°	557.2	557.8	558.5	558.4	557.4	556.6	555.6	554.8
177.5°	557.4	557.9	558.5	558.4	557.7	557.0	556.4	555.8
180°	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8

(END OF REPORT)