

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: P331673-840

Luminaire Tested: **S122RDIP-S485D1080U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331673-840
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: S122RDIP-S485D1080U840-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1080 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5606.5 lumens
Efficiency: N/A
Efficacy: 113.5 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

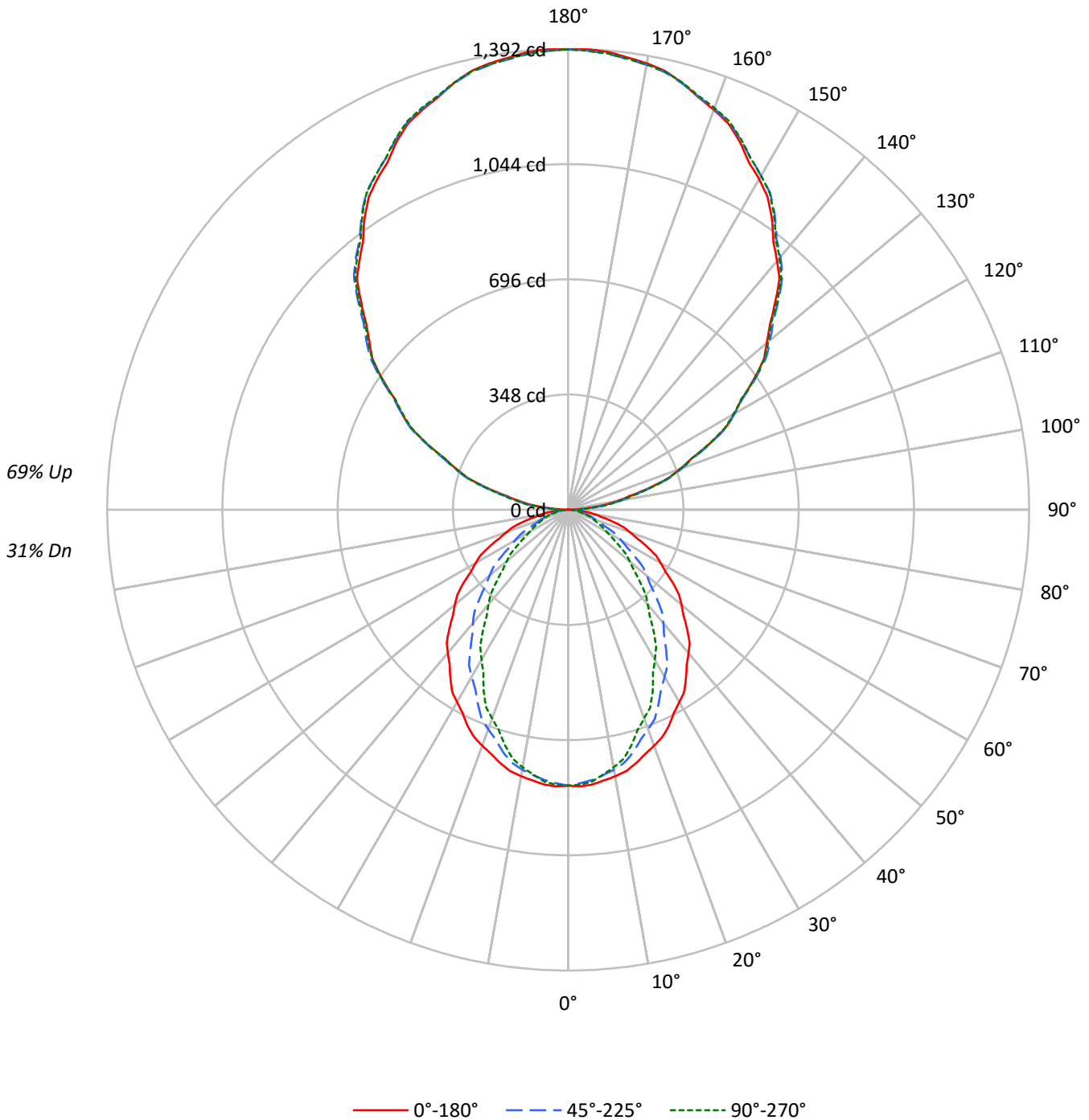
Input Watts (W): 49.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	38	38	38	31
1	94	90	86	83	84	81	78	75	64	62	60	48	47	46	34	34	33	26
2	86	79	73	68	77	71	66	62	56	53	50	43	41	39	31	29	28	23
3	78	69	62	57	70	63	57	52	50	46	42	38	35	33	27	26	24	19
4	72	61	54	48	64	56	49	44	44	40	36	34	31	29	25	23	21	17
5	66	55	47	41	59	50	43	38	40	35	31	31	27	25	22	20	19	15
6	61	49	41	36	54	45	38	33	36	31	27	28	24	22	20	18	16	13
7	56	44	37	31	50	40	34	29	33	28	24	25	22	19	19	16	15	12
8	52	40	33	28	47	37	30	26	30	25	21	23	20	17	17	15	13	11
9	48	37	29	25	43	33	27	23	27	22	19	21	18	16	16	14	12	10
10	45	33	27	22	41	31	24	20	25	20	17	20	16	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13454	13454	13454
5°	13506	13287	13361
10°	13404	13070	12959
15°	13249	12682	12318
20°	13036	12129	11519
25°	12818	11501	10750
30°	12515	10856	9758
35°	12220	10153	8889
40°	11921	9428	7885
45°	11574	8611	6976
50°	11215	7784	6081
55°	10849	6899	5222
60°	10424	5968	4334
65°	9941	5012	3947
70°	9361	4131	3635
75°	8659	3762	3387
80°	7643	3366	3087
85°	6002	2649	2649



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.0	1.4
10°-20°	214.2	3.8
20°-30°	300.8	5.4
30°-40°	328.0	5.9
40°-50°	301.6	5.4
50°-60°	236.8	4.2
60°-70°	154.4	2.8
70°-80°	79.6	1.4
80°-90°	26.2	0.5
90°-100°	88.1	1.6
100°-110°	273.6	4.9
110°-120°	467.6	8.3
120°-130°	614.9	11.0
130°-140°	690.2	12.3
140°-150°	676.7	12.1
150°-160°	567.6	10.1
160°-170°	376.5	6.7
170°-180°	131.6	2.3
0°-30°	593.0	10.6
0°-40°	921.0	16.4
0°-60°	1459.4	26.0
0°-90°	1719.6	30.7
90°-120°	829.3	14.8
90°-150°	2811.1	50.1
90°-180°	3887.0	69.3
0°-180°	5606.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	833	833	833	833	833	
5°	833	829	820	826	824	79
15°	793	783	759	745	737	223
25°	720	694	646	616	603	331
35°	620	580	515	469	451	388
45°	507	455	377	326	306	391
55°	385	325	245	202	186	344
65°	260	199	131	107	103	258
75°	139	87	60	55	54	147
85°	32	17	14	14	14	38
90°	1	16	41	39	40	5
95°	61	72	75	75	73	70
105°	252	256	258	260	260	266
115°	469	476	474	473	469	464
125°	683	692	690	686	685	610
135°	883	896	899	897	894	682
145°	1072	1080	1087	1088	1084	670
155°	1226	1229	1233	1238	1235	564
165°	1334	1333	1333	1340	1335	376
175°	1388	1384	1382	1389	1383	132
180°	1390	1390	1390	1390	1390	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	836.4	835.8	835.1	834.4	833.7	832.6	831.2	829.7	828.2	826.8	828.1
5°	833.3	832.5	831.7	830.9	830.0	828.5	826.4	824.2	822.0	819.8	821.3
7.5°	824.8	823.7	822.7	821.6	820.6	818.8	816.3	813.7	811.2	808.7	809.1
10°	817.6	816.4	815.2	814.1	812.8	810.6	807.3	803.9	800.5	797.2	796.7
12.5°	808.5	807.1	805.6	804.2	802.7	799.9	795.6	791.3	787.0	782.7	781.8
15°	792.6	790.8	789.0	787.1	785.3	781.5	775.8	770.1	764.5	758.7	755.6
17.5°	773.3	770.4	767.6	764.8	761.9	756.9	749.6	742.3	735.0	727.6	723.9
20°	758.7	755.4	752.0	748.7	745.3	739.4	731.0	722.7	714.3	705.9	701.8
22.5°	743.1	739.3	735.5	731.7	728.0	721.4	712.0	702.5	693.1	683.6	678.2
25°	719.5	714.2	708.8	703.4	698.0	689.8	678.7	667.7	656.6	645.6	638.7
27.5°	691.2	685.3	679.4	673.7	667.8	658.6	646.2	633.7	621.3	608.7	600.8
30°	671.3	664.9	658.5	652.2	645.8	635.9	622.5	609.0	595.6	582.3	573.7
32.5°	652.0	644.5	637.0	629.7	622.2	611.6	597.9	584.2	570.6	556.9	547.1
35°	620.0	611.4	602.9	594.3	585.7	574.1	559.4	544.6	529.9	515.1	504.5
37.5°	587.9	578.6	569.2	559.8	550.5	537.9	522.2	506.4	490.7	475.0	463.3
40°	565.6	555.6	545.5	535.5	525.4	512.3	496.0	479.8	463.5	447.3	435.4
42.5°	542.7	532.1	521.5	511.0	500.4	486.7	469.9	453.0	436.3	419.5	407.2
45°	506.9	495.6	484.3	473.1	461.9	447.5	429.9	412.3	394.7	377.1	365.2
47.5°	471.8	459.9	448.1	436.2	424.2	409.2	391.0	372.8	354.7	336.5	324.7
50°	446.5	434.5	422.7	410.8	398.9	383.7	365.3	346.9	328.4	309.9	298.4
52.5°	421.7	409.3	396.9	384.5	372.0	356.8	338.7	320.7	302.7	284.7	273.5
55°	385.4	372.3	359.2	346.2	333.2	317.5	299.4	281.3	263.2	245.1	235.1
57.5°	348.1	334.8	321.3	307.9	294.5	279.1	261.8	244.3	226.9	209.5	200.3
60°	322.8	309.4	296.0	282.6	269.1	253.9	236.6	219.3	202.1	184.8	176.2
62.5°	298.0	284.7	271.2	257.8	244.4	229.5	213.1	196.6	180.2	163.7	155.5
65°	260.2	246.6	233.1	219.4	205.9	191.6	176.5	161.4	146.3	131.2	125.5
67.5°	223.7	210.3	196.7	183.3	169.8	156.2	142.7	129.2	115.5	102.0	99.4
70°	198.3	185.3	172.2	159.2	146.0	133.7	122.2	110.6	99.1	87.5	85.8
72.5°	174.2	161.7	149.2	136.6	124.1	113.2	103.9	94.6	85.3	76.0	74.6
75°	138.8	127.0	115.3	103.6	91.8	83.1	77.5	71.7	66.0	60.3	59.2
77.5°	103.9	93.6	83.3	73.0	62.8	56.2	53.5	50.8	48.0	45.2	44.5
80°	82.2	73.6	65.1	56.6	48.0	42.9	41.2	39.6	37.9	36.2	35.5
82.5°	62.3	55.6	49.0	42.3	35.6	31.7	30.6	29.4	28.3	27.2	26.8
85°	32.4	28.9	25.3	21.9	18.4	16.4	15.9	15.3	14.8	14.3	14.3
87.5°	9.9	9.4	9.0	8.6	8.1	8.5	9.6	10.7	11.9	13.0	12.8
90°	1.2	4.3	7.5	10.6	13.7	18.1	23.8	29.6	35.3	41.1	40.5
92.5°	20.9	23.1	25.4	27.8	30.1	31.9	33.2	34.6	36.0	37.3	37.4
95°	61.0	63.6	66.2	68.8	71.4	73.0	73.5	74.0	74.5	75.0	75.0
97.5°	111.5	113.7	116.0	118.4	120.6	122.3	123.2	124.2	125.2	126.2	126.2
100°	149.0	151.1	153.2	155.2	157.3	158.8	159.6	160.3	161.1	161.9	161.9
102.5°	188.4	190.1	191.8	193.4	195.1	196.4	197.4	198.3	199.3	200.4	200.6
105°	252.2	253.0	253.8	254.6	255.3	256.0	256.5	257.0	257.5	258.0	258.6
107.5°	316.5	317.6	318.8	319.9	321.0	321.6	321.6	321.6	321.6	321.6	321.8
110°	357.8	359.3	360.9	362.4	364.1	364.9	364.9	364.9	364.9	364.9	364.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	402.8	404.3	406.0	407.5	409.1	409.8	409.5	409.3	409.1	408.9	408.3
115°	469.2	470.8	472.3	473.9	475.4	475.9	475.4	474.9	474.4	473.9	473.6
117.5°	535.3	537.5	539.6	541.6	543.7	544.0	542.6	541.1	539.7	538.2	537.6
120°	579.5	581.6	583.7	585.7	587.8	587.8	585.7	583.7	581.6	579.5	579.5
122.5°	619.9	622.4	624.8	627.3	629.9	630.4	628.9	627.4	626.0	624.5	623.9
125°	682.7	685.1	687.4	689.7	692.1	692.9	692.1	691.4	690.5	689.7	688.9
127.5°	744.0	746.9	749.9	752.9	755.8	756.9	755.9	755.0	754.1	753.1	752.1
130°	782.4	785.8	789.2	792.5	796.0	797.4	796.9	796.4	795.9	795.4	794.8
132.5°	825.6	828.4	831.1	833.8	836.7	838.1	838.2	838.3	838.4	838.5	837.4
135°	883.3	886.2	889.1	891.9	894.7	896.5	897.0	897.5	898.1	898.6	898.3
137.5°	944.0	946.4	948.8	951.1	953.4	954.9	955.6	956.3	956.9	957.7	957.5
140°	980.7	983.0	985.3	987.7	990.1	991.9	993.2	994.5	995.8	997.0	997.0
142.5°	1018.2	1020.6	1022.9	1025.2	1027.5	1029.2	1030.1	1031.0	1031.9	1032.8	1033.0
145°	1072.2	1074.0	1075.8	1077.6	1079.4	1081.2	1082.7	1084.3	1085.8	1087.4	1087.6
147.5°	1120.2	1122.5	1124.6	1126.8	1129.0	1130.6	1131.7	1132.8	1133.8	1134.8	1135.4
150°	1153.1	1154.7	1156.2	1157.8	1159.3	1160.6	1161.7	1162.8	1163.8	1164.9	1165.6
152.5°	1182.1	1183.8	1185.3	1186.9	1188.4	1189.8	1191.1	1192.3	1193.7	1194.9	1195.9
155°	1225.9	1226.6	1227.4	1228.2	1229.0	1229.7	1230.5	1231.3	1232.1	1232.8	1234.2
157.5°	1263.1	1263.6	1264.1	1264.7	1265.3	1265.7	1266.2	1266.7	1267.1	1267.6	1269.4
160°	1285.7	1286.2	1286.7	1287.2	1287.8	1288.1	1288.4	1288.7	1288.9	1289.2	1290.7
162.5°	1306.3	1306.4	1306.5	1306.6	1306.8	1306.9	1307.2	1307.4	1307.7	1308.0	1309.7
165°	1333.7	1333.5	1333.2	1332.9	1332.7	1332.6	1332.6	1332.6	1332.6	1332.6	1334.4
167.5°	1356.8	1355.9	1355.1	1354.4	1353.6	1353.2	1353.1	1353.1	1353.0	1353.0	1354.8
170°	1369.0	1368.2	1367.4	1366.5	1365.8	1365.3	1365.0	1364.7	1364.5	1364.2	1366.0
172.5°	1377.4	1376.6	1375.8	1375.0	1374.2	1373.7	1373.5	1373.2	1372.9	1372.7	1374.5
175°	1387.8	1386.9	1386.1	1385.3	1384.6	1383.9	1383.4	1382.9	1382.4	1381.8	1383.7
177.5°	1391.9	1391.3	1390.7	1390.1	1389.5	1388.9	1388.5	1388.1	1387.7	1387.3	1388.5
180°	1390.1	1390.1	1390.1	1390.1	1390.1	1390.1	1390.1	1390.1	1390.1	1390.1	1390.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	829.4	830.8	832.1	832.6	832.4	832.1	831.8	831.6
5°	822.8	824.4	825.9	826.4	825.9	825.4	824.9	824.4
7.5°	809.5	809.9	810.4	810.2	809.3	808.4	807.6	806.7
10°	796.2	795.7	795.2	794.5	793.5	792.4	791.4	790.4
12.5°	780.9	780.0	779.1	777.8	776.1	774.5	772.7	771.1
15°	752.3	749.2	746.0	743.6	741.8	740.2	738.5	736.9
17.5°	720.0	716.3	712.5	709.1	706.3	703.4	700.5	697.6
20°	697.5	693.4	689.1	685.2	681.6	677.8	674.2	670.4
22.5°	672.8	667.4	662.1	657.9	655.2	652.5	649.7	646.9
25°	631.9	625.0	618.1	613.4	610.9	608.3	605.9	603.4
27.5°	592.8	584.7	576.7	570.8	566.7	562.8	558.8	554.8
30°	565.1	556.6	548.1	541.5	536.9	532.5	528.0	523.4
32.5°	537.3	527.7	517.9	510.9	506.6	502.4	498.1	493.8
35°	494.0	483.4	472.9	465.7	462.1	458.4	454.7	451.0
37.5°	451.7	440.1	428.5	420.5	416.4	412.1	407.9	403.6
40°	423.4	411.5	399.6	391.5	387.2	382.8	378.4	374.1
42.5°	394.9	382.5	370.3	362.0	357.8	353.6	349.3	345.1
45°	353.3	341.4	329.5	321.5	317.5	313.5	309.4	305.5
47.5°	312.9	301.0	289.2	281.4	277.8	274.2	270.4	266.8
50°	286.8	275.3	263.7	256.2	252.7	249.1	245.6	242.1
52.5°	262.3	251.2	239.9	232.8	229.5	226.3	223.0	219.7
55°	225.0	214.9	204.9	198.2	195.1	191.9	188.7	185.5
57.5°	191.1	181.9	172.7	166.7	164.0	161.4	158.6	155.9
60°	167.6	159.2	150.6	145.0	142.3	139.6	136.9	134.2
62.5°	147.3	139.3	131.1	126.2	124.6	123.0	121.4	119.8
65°	119.9	114.1	108.5	105.3	104.8	104.3	103.8	103.3
67.5°	96.7	94.1	91.5	90.0	89.4	88.9	88.4	87.8
70°	84.1	82.5	80.8	79.6	79.0	78.3	77.6	77.0
72.5°	73.2	71.8	70.4	69.5	69.1	68.7	68.3	67.9
75°	58.0	56.9	55.6	54.9	54.8	54.6	54.4	54.3
77.5°	43.9	43.2	42.6	42.1	41.8	41.6	41.3	41.0
80°	34.8	34.2	33.5	33.2	33.2	33.2	33.2	33.2
82.5°	26.4	26.0	25.5	25.3	25.3	25.3	25.3	25.3
85°	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
87.5°	12.5	12.3	12.1	12.0	12.0	12.1	12.1	12.2
90°	40.0	39.5	39.0	38.9	39.1	39.4	39.6	39.9
92.5°	37.5	37.6	37.8	37.8	37.9	37.9	38.0	38.0
95°	75.0	75.0	75.0	74.8	74.3	73.8	73.2	72.7
97.5°	126.2	126.2	126.2	126.2	126.1	126.1	126.0	126.0
100°	161.9	161.9	161.9	161.8	161.5	161.3	161.0	160.7
102.5°	200.8	201.0	201.2	201.2	200.9	200.7	200.4	200.2
105°	259.1	259.6	260.1	260.4	260.4	260.4	260.4	260.4
107.5°	322.0	322.2	322.4	321.9	320.8	319.6	318.4	317.2
110°	364.9	364.9	364.9	364.5	363.7	362.8	362.0	361.3



TEST NUMBER: P331673-840

CATALOG NUMBER: S122RDIP-S485D1080U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	407.7	407.1	406.5	405.9	405.3	404.7	404.1	403.5
115°	473.4	473.1	472.8	472.3	471.6	470.8	470.0	469.2
117.5°	536.9	536.3	535.7	535.0	534.2	533.4	532.6	531.9
120°	579.5	579.5	579.5	579.1	578.3	577.5	576.7	575.9
122.5°	623.3	622.7	622.0	621.5	620.9	620.3	619.8	619.1
125°	688.2	687.4	686.6	686.1	685.8	685.6	685.3	685.1
127.5°	751.2	750.2	749.3	748.4	747.6	746.8	746.0	745.1
130°	794.3	793.8	793.2	792.4	791.4	790.3	789.3	788.3
132.5°	836.2	835.1	833.9	832.9	832.1	831.2	830.4	829.6
135°	898.1	897.8	897.5	897.0	896.2	895.4	894.6	893.8
137.5°	957.3	957.0	956.8	956.2	955.1	954.1	953.1	952.0
140°	997.0	997.0	997.0	996.5	995.5	994.5	993.4	992.4
142.5°	1033.2	1033.4	1033.6	1033.2	1032.1	1031.1	1030.1	1029.0
145°	1087.9	1088.2	1088.4	1088.0	1087.0	1086.0	1084.9	1083.9
147.5°	1136.0	1136.5	1137.1	1136.9	1135.9	1134.9	1133.9	1133.0
150°	1166.4	1167.2	1168.0	1168.0	1167.2	1166.4	1165.6	1164.9
152.5°	1196.9	1197.8	1198.8	1198.8	1197.8	1196.9	1195.9	1194.9
155°	1235.5	1236.8	1238.1	1238.3	1237.6	1236.8	1236.0	1235.2
157.5°	1271.1	1272.9	1274.7	1275.0	1273.6	1272.4	1271.2	1269.9
160°	1292.3	1293.8	1295.5	1295.7	1294.6	1293.6	1292.5	1291.5
162.5°	1311.5	1313.2	1315.0	1315.2	1314.0	1312.8	1311.5	1310.3
165°	1336.3	1338.1	1339.9	1340.1	1338.9	1337.6	1336.3	1334.9
167.5°	1356.7	1358.5	1360.3	1360.5	1359.2	1357.8	1356.5	1355.1
170°	1367.9	1369.7	1371.5	1371.7	1370.1	1368.6	1367.0	1365.4
172.5°	1376.3	1378.2	1380.0	1380.1	1378.6	1377.0	1375.4	1373.8
175°	1385.5	1387.4	1389.2	1389.3	1387.8	1386.1	1384.6	1383.0
177.5°	1389.8	1391.0	1392.2	1392.2	1391.0	1389.8	1388.5	1387.3
180°	1390.1	1390.1	1390.1	1390.1	1390.1	1390.1	1390.1	1390.1

(END OF REPORT)