

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: P331362-940

Luminaire Tested: **S122DIP-S675D925U940-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331362-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S675D925U940-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5620.8 lumens  
Efficiency: N/A  
Efficacy: 108.1 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

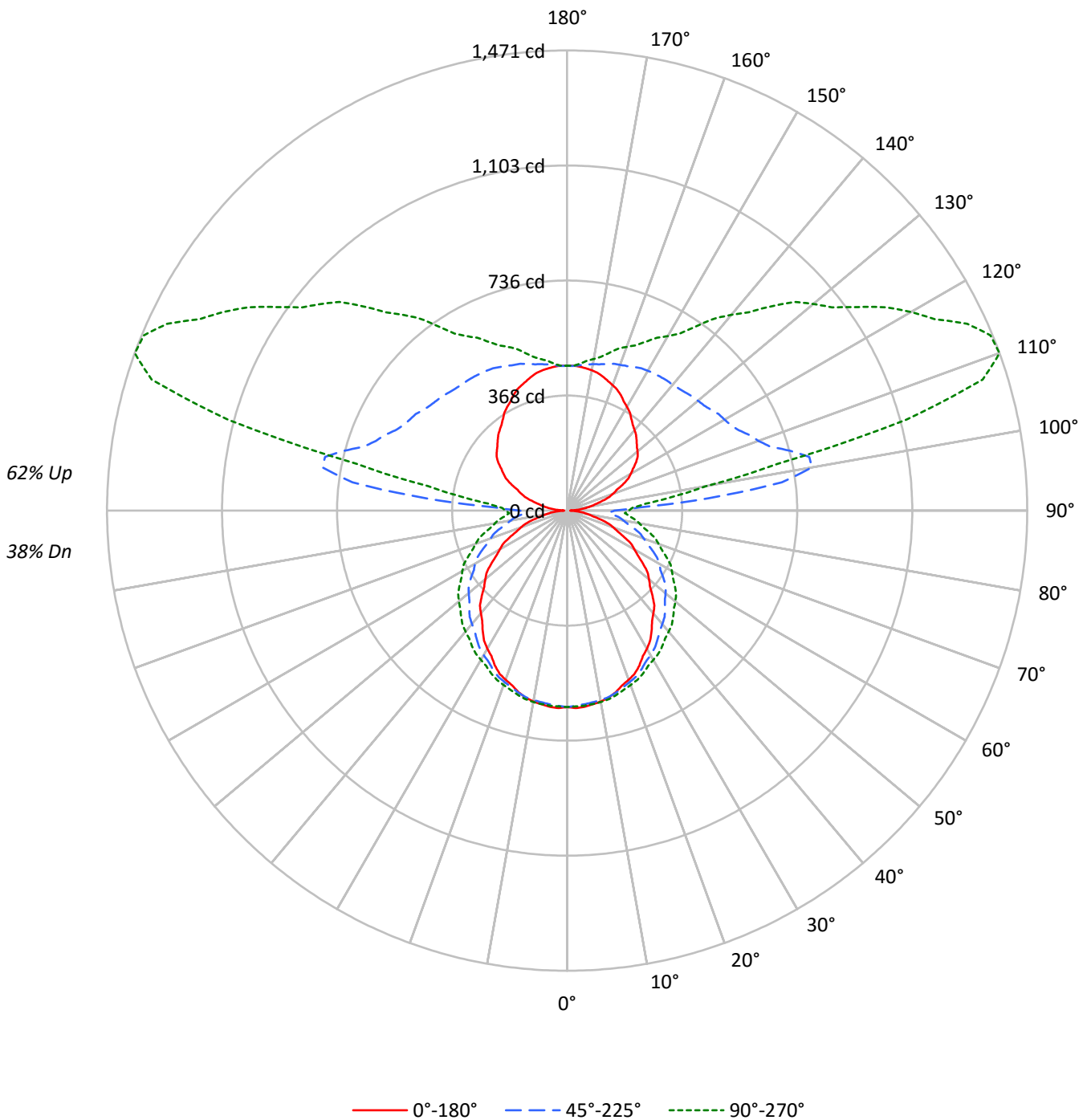
Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331362-940

CATALOG NUMBER: S122DIP-S675D925U940-4F0-1E-UDD-D4

### Luminous Intensity Polar Plot





TEST NUMBER: P331362-940

CATALOG NUMBER: S122DIP-S675D925U940-4F0-1E-UDD-D4

**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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	94	89	85	81	85	81	77	74	65	63	60	51	49	48	38	37	36	30
2	85	77	71	65	77	70	64	60	57	53	49	44	41	39	33	31	29	24
3	77	67	60	54	70	61	55	49	50	45	41	39	35	32	29	26	24	20
4	70	59	51	45	63	54	47	41	44	38	34	34	30	27	25	23	21	17
5	64	53	44	38	58	48	41	35	39	33	29	31	27	23	23	20	18	14
6	59	47	39	33	53	43	36	30	35	29	25	27	23	20	20	18	15	12
7	55	42	34	29	49	39	31	26	31	26	22	25	21	18	19	16	14	11
8	51	38	30	25	46	35	28	23	29	23	19	23	19	16	17	14	12	10
9	47	35	27	22	43	32	25	21	26	21	17	21	17	14	16	13	11	9
10	44	32	25	20	40	29	23	18	24	19	15	19	15	13	15	12	10	8

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10141	10141	10141
5°	10191	9762	9724
10°	10126	9474	9367
15°	9987	9168	8990
20°	9810	8841	8627
25°	9637	8525	8298
30°	9392	8201	7967
35°	9142	7888	7735
40°	8880	7621	7501
45°	8632	7383	7302
50°	8365	7166	7106
55°	8089	6934	6906
60°	7745	6695	6695
65°	7391	6412	6445
70°	6992	6110	6173
75°	6483	5811	5925
80°	5680	5509	5672
85°	4908	5245	5473



TEST NUMBER: P331362-940

CATALOG NUMBER: S122DIP-S675D925U940-4F0-1E-UDD-D4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.5	1.1
10°-20°	170.7	3.0
20°-30°	258.6	4.6
30°-40°	315.0	5.6
40°-50°	338.9	6.0
50°-60°	329.1	5.9
60°-70°	287.4	5.1
70°-80°	221.2	3.9
80°-90°	152.6	2.7
90°-100°	287.3	5.1
100°-110°	702.6	12.5
110°-120°	716.4	12.7
120°-130°	576.7	10.3
130°-140°	452.5	8.1
140°-150°	335.3	6.0
150°-160°	234.2	4.2
160°-170°	137.9	2.5
170°-180°	44.9	0.8
0°-30°	488.8	8.7
0°-40°	803.8	14.3
0°-60°	1471.8	26.2
0°-90°	2133.0	37.9
90°-120°	1706.3	30.4
90°-150°	3070.8	54.6
90°-180°	3488.0	62.1
0°-180°	5620.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	630	627	622	627	626	60
15°	601	602	603	610	610	169
25°	546	553	561	571	574	251
35°	471	486	503	523	530	294
45°	386	411	442	470	480	298
55°	296	329	376	408	420	264
65°	202	247	300	336	350	201
75°	112	163	221	259	272	118
85°	33	89	148	184	198	35
90°	10	74	150	184	197	8
95°	38	127	454	270	252	39
105°	113	196	738	1288	1123	121
115°	195	257	606	1220	1412	193
125°	269	319	561	977	1134	239
135°	314	375	534	804	924	243
145°	358	411	522	653	718	225
155°	407	439	506	573	595	187
165°	443	457	485	514	522	125
175°	462	462	466	472	471	44
180°	463	463	463	463	463	



TEST NUMBER: P331362-940

CATALOG NUMBER: S122DIP-S675D925U940-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	631.8	631.2	630.8	630.3	629.8	629.0	627.9	626.7	625.6	624.5	625.3
5°	629.9	629.3	628.7	628.1	627.5	626.6	625.4	624.2	622.9	621.7	622.9
7.5°	624.3	623.8	623.5	623.0	622.7	622.0	621.1	620.1	619.2	618.3	619.7
10°	619.9	619.5	619.1	618.7	618.3	617.8	617.2	616.6	616.0	615.4	617.0
12.5°	612.6	612.7	612.8	612.9	613.0	612.8	612.3	611.9	611.4	611.0	612.6
15°	600.8	601.2	601.6	602.0	602.4	602.6	602.6	602.6	602.6	602.6	604.4
17.5°	585.5	586.4	587.2	588.1	588.9	589.7	590.3	590.9	591.6	592.3	594.1
20°	575.3	576.3	577.3	578.4	579.3	580.2	581.0	581.9	582.7	583.5	585.8
22.5°	564.4	565.5	566.8	567.9	569.1	570.2	571.4	572.5	573.6	574.8	577.0
25°	546.2	547.6	549.0	550.5	551.9	553.5	555.3	557.1	558.9	560.7	563.2
27.5°	524.3	526.6	529.0	531.3	533.6	535.8	538.0	540.1	542.2	544.4	547.4
30°	509.8	512.4	515.1	517.6	520.3	522.9	525.6	528.2	530.8	533.4	536.6
32.5°	493.7	496.7	499.6	502.6	505.6	508.6	511.8	514.8	517.9	521.0	524.8
35°	470.6	474.0	477.5	480.9	484.4	488.0	491.9	495.7	499.5	503.4	507.8
37.5°	445.5	449.5	453.4	457.4	461.4	465.8	470.8	475.8	480.7	485.7	490.7
40°	428.7	433.2	437.7	442.1	446.6	451.5	457.0	462.4	467.9	473.3	478.6
42.5°	412.8	417.1	421.6	426.1	430.5	435.9	442.2	448.4	454.7	461.0	466.7
45°	385.9	391.5	396.9	402.3	407.8	414.1	421.2	428.3	435.3	442.4	448.7
47.5°	359.5	365.5	371.5	377.4	383.3	390.5	398.8	407.1	415.4	423.7	430.3
50°	341.3	347.7	353.9	360.2	366.4	374.2	383.3	392.4	401.4	410.5	417.4
52.5°	323.9	330.5	337.1	343.7	350.3	358.4	367.9	377.6	387.1	396.7	403.8
55°	295.9	303.1	310.4	317.7	324.9	333.9	344.4	354.9	365.4	375.9	383.3
57.5°	268.1	276.4	284.6	292.8	301.0	310.5	321.2	331.9	342.7	353.4	361.2
60°	248.5	257.2	265.9	274.6	283.3	293.5	305.0	316.5	328.0	339.6	347.2
62.5°	231.0	240.0	249.1	258.1	267.2	277.4	288.9	300.4	312.0	323.5	331.7
65°	202.1	212.0	221.9	231.8	241.7	252.6	264.6	276.5	288.5	300.4	308.7
67.5°	175.5	185.8	196.3	206.6	217.0	228.2	240.4	252.6	264.8	277.1	285.4
70°	156.6	167.1	177.6	188.2	198.7	210.2	222.7	235.2	247.8	260.4	269.0
72.5°	139.1	149.9	160.8	171.7	182.4	194.2	207.0	219.6	232.4	245.0	253.6
75°	112.0	123.3	134.6	146.0	157.3	169.4	182.4	195.3	208.2	221.2	229.9
77.5°	85.8	97.6	109.5	121.3	133.1	145.7	158.8	172.0	185.1	198.2	207.0
80°	68.3	80.6	92.9	105.3	117.6	130.4	143.6	156.7	169.8	183.0	191.5
82.5°	53.7	65.9	78.0	90.2	102.5	115.1	128.5	141.8	155.1	168.4	176.9
85°	32.8	45.3	57.9	70.4	82.9	95.7	108.6	121.5	134.6	147.5	156.0
87.5°	18.0	30.6	43.3	55.8	68.2	81.2	95.1	109.2	123.3	136.4	144.5
90°	10.0	24.4	39.7	53.2	66.7	81.7	99.2	118.3	136.6	150.4	157.7
92.5°	19.3	35.0	52.3	67.1	84.1	104.2	136.7	177.5	215.3	229.3	219.3
95°	38.4	51.5	69.9	87.4	111.2	143.4	196.4	286.0	401.4	453.5	417.6
97.5°	57.1	70.4	88.3	108.8	133.7	167.9	231.0	350.5	533.8	692.4	729.1
100°	74.9	85.1	100.6	122.3	147.6	181.9	240.4	360.3	563.8	794.1	929.7
102.5°	90.5	99.3	114.2	135.3	160.6	194.5	249.1	356.5	545.5	792.6	1001.4
105°	113.2	122.5	134.6	153.8	179.3	212.4	264.7	354.5	511.8	737.7	981.5
107.5°	138.6	146.2	156.9	173.8	198.0	230.4	281.1	360.2	491.7	679.8	895.6
110°	154.9	162.6	171.9	187.5	210.3	243.1	292.1	366.1	484.6	651.1	841.9



TEST NUMBER: P331362-940

CATALOG NUMBER: S122DIP-S675D925U940-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	170.6	177.5	187.0	201.3	222.7	255.6	302.7	372.6	480.7	630.4	802.5
115°	195.0	201.6	209.2	222.1	242.2	271.9	319.2	382.6	478.0	606.4	753.0
117.5°	219.4	224.4	231.1	242.0	260.6	290.4	334.3	393.6	477.7	590.6	718.8
120°	235.0	239.3	245.5	254.3	273.0	302.3	345.1	401.3	477.9	581.2	699.9
122.5°	249.9	253.2	258.8	267.9	286.0	315.6	355.7	407.9	479.0	574.0	683.2
125°	268.9	271.4	276.8	287.5	305.3	333.4	371.9	418.5	480.1	561.3	658.5
127.5°	284.5	287.8	295.1	306.7	323.5	351.7	388.1	429.2	482.5	551.8	635.4
130°	293.7	297.1	305.8	318.1	335.6	362.6	398.0	436.0	484.8	546.0	620.3
132.5°	302.3	306.3	315.8	328.7	347.1	373.4	406.4	442.8	487.1	540.9	607.2
135°	314.1	317.7	328.4	341.8	362.2	388.2	418.7	451.8	489.5	534.2	589.2
137.5°	326.3	330.5	341.2	355.3	375.6	399.1	428.2	458.1	491.3	528.7	575.0
140°	335.6	338.9	349.4	363.4	382.8	406.0	433.1	461.1	491.8	525.1	566.6
142.5°	344.8	347.4	357.2	371.2	389.9	411.5	437.7	464.6	492.8	523.6	559.5
145°	357.8	361.3	370.2	383.6	401.4	421.0	445.0	469.9	494.8	521.5	551.2
147.5°	372.7	375.4	383.9	396.2	411.0	428.5	451.0	473.0	495.5	518.4	543.4
150°	382.7	385.3	392.4	404.0	417.4	433.4	453.9	474.3	494.8	516.2	537.5
152.5°	392.6	393.9	401.0	411.2	423.8	438.4	456.7	475.0	493.4	512.6	532.5
155°	406.7	407.6	413.0	422.8	432.5	445.9	461.0	476.1	491.2	506.4	523.3
157.5°	418.5	419.4	423.7	432.1	440.0	451.2	464.0	476.1	487.1	500.0	514.6
160°	426.3	427.2	430.7	437.8	445.0	454.8	465.5	476.1	485.0	495.7	508.2
162.5°	434.1	433.5	437.1	442.8	449.2	456.9	466.2	475.4	482.9	492.1	502.5
165°	443.2	442.3	444.1	449.4	453.9	459.2	467.3	473.5	478.8	485.0	493.0
167.5°	450.7	449.6	451.2	454.6	457.8	461.2	467.1	472.3	474.7	478.8	483.8
170°	455.7	453.9	454.8	457.4	459.2	461.9	466.4	470.8	472.6	475.2	478.8
172.5°	458.5	457.4	456.9	459.6	460.7	462.6	465.7	468.7	469.8	471.0	473.9
175°	461.9	461.0	460.1	461.9	461.9	462.8	464.6	466.4	465.5	466.4	467.3
177.5°	463.5	462.1	461.4	462.8	462.8	462.8	463.5	464.9	463.5	462.8	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8



TEST NUMBER: P331362-940

CATALOG NUMBER: S122DIP-S675D925U940-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	626.1	626.9	627.7	627.9	627.6	627.3	627.0	626.7
5°	624.2	625.4	626.6	627.1	626.9	626.7	626.5	626.2
7.5°	621.2	622.7	624.1	624.7	624.6	624.3	624.1	623.9
10°	618.6	620.2	621.9	622.5	622.3	622.1	622.0	621.7
12.5°	614.2	615.8	617.5	618.1	618.0	617.8	617.6	617.3
15°	606.3	608.1	609.9	610.7	610.6	610.3	610.1	609.9
17.5°	596.0	598.0	599.9	600.8	600.8	600.8	600.8	600.8
20°	588.0	590.2	592.4	593.5	593.5	593.5	593.5	593.5
22.5°	579.3	581.5	583.6	585.0	585.2	585.6	585.9	586.2
25°	565.6	568.0	570.4	571.9	572.6	573.2	573.8	574.4
27.5°	550.5	553.6	556.7	558.4	558.8	559.3	559.7	560.2
30°	539.9	543.1	546.4	548.3	548.9	549.6	550.1	550.7
32.5°	528.5	532.3	535.9	538.3	539.5	540.6	541.6	542.7
35°	512.3	516.7	521.2	524.1	525.6	527.0	528.3	529.8
37.5°	495.6	500.5	505.5	508.7	510.2	511.7	513.2	514.7
40°	483.8	489.1	494.4	497.9	499.7	501.6	503.4	505.2
42.5°	472.4	478.2	483.9	487.8	489.5	491.4	493.2	495.0
45°	455.0	461.2	467.5	471.6	473.7	475.7	477.7	479.7
47.5°	436.8	443.4	449.9	454.2	456.5	458.7	460.9	463.2
50°	424.3	431.1	438.1	442.6	444.9	447.1	449.2	451.5
52.5°	410.8	417.9	424.9	429.6	431.9	434.4	436.8	439.2
55°	390.5	397.8	405.1	410.0	412.7	415.3	417.9	420.5
57.5°	369.1	376.9	384.8	390.0	392.7	395.4	398.1	400.7
60°	354.9	362.6	370.3	375.6	378.4	381.2	384.1	386.9
62.5°	339.8	348.0	356.2	361.7	364.3	366.9	369.6	372.3
65°	317.0	325.3	333.6	339.0	341.7	344.3	347.0	349.6
67.5°	293.8	302.2	310.6	316.2	318.9	321.6	324.4	327.2
70°	277.8	286.4	295.2	300.7	303.1	305.6	308.0	310.4
72.5°	262.2	270.6	279.2	284.9	287.8	290.8	293.6	296.6
75°	238.6	247.3	256.0	261.6	264.3	266.9	269.6	272.2
77.5°	215.6	224.3	232.9	238.6	241.5	244.3	247.1	249.9
80°	199.9	208.5	217.0	222.7	225.4	228.3	231.1	234.0
82.5°	185.4	193.9	202.4	207.9	210.6	213.3	216.0	218.6
85°	164.4	173.0	181.5	187.1	189.9	192.8	195.6	198.4
87.5°	152.6	160.4	169.1	174.7	177.3	179.9	182.4	185.0
90°	164.8	171.1	181.0	187.2	189.6	192.0	194.4	196.9
92.5°	207.1	203.9	204.4	204.1	205.8	205.4	208.5	209.6
95°	353.2	306.7	277.0	262.4	253.2	248.6	248.3	251.6
97.5°	655.9	564.5	475.6	416.3	376.2	356.7	346.1	341.0
100°	918.6	815.6	701.2	598.4	526.7	490.7	467.1	453.3
102.5°	1089.0	1071.4	989.5	880.2	802.2	739.0	709.1	689.6
105°	1173.8	1281.4	1300.0	1275.3	1222.4	1169.4	1133.4	1123.1
107.5°	1098.8	1257.0	1356.4	1404.0	1413.2	1412.4	1406.9	1392.6
110°	1036.1	1201.8	1322.2	1399.5	1440.1	1459.2	1469.5	1470.8





TEST NUMBER: P331362-940

CATALOG NUMBER: S122DIP-S675D925U940-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	978.3	1137.6	1265.9	1353.9	1409.3	1439.8	1457.2	1464.3
115°	906.0	1049.1	1171.8	1267.6	1333.0	1376.2	1401.5	1411.8
117.5°	849.6	975.9	1087.6	1177.6	1244.1	1289.4	1315.9	1324.7
120°	820.4	936.4	1036.3	1121.3	1185.8	1229.8	1257.9	1269.1
122.5°	796.5	903.0	997.9	1074.8	1132.6	1175.5	1200.4	1209.8
125°	761.0	858.1	941.8	1012.3	1065.7	1101.4	1125.4	1134.3
127.5°	725.9	813.9	892.8	957.8	1004.6	1038.0	1059.0	1066.5
130°	703.5	784.8	860.0	921.9	967.1	999.1	1018.5	1027.3
132.5°	681.6	757.2	826.5	884.8	929.3	961.2	979.2	987.2
135°	651.3	714.3	777.2	830.0	869.9	900.9	918.6	923.7
137.5°	625.9	678.8	729.1	775.1	811.4	837.9	853.5	860.1
140°	609.9	655.9	700.0	741.5	771.1	795.5	810.0	816.5
142.5°	597.2	636.1	674.0	708.5	736.6	758.7	771.6	773.7
145°	580.0	610.6	639.4	666.3	688.7	704.8	714.7	718.5
147.5°	567.0	590.3	612.1	631.2	649.3	661.9	668.4	670.6
150°	558.9	578.5	597.2	613.1	626.5	637.2	642.6	643.5
152.5°	551.1	569.2	585.1	599.0	609.4	618.7	622.6	622.8
155°	540.2	554.5	567.8	577.6	587.4	593.6	597.2	595.4
157.5°	527.5	539.5	550.7	558.4	565.3	570.4	572.0	572.0
160°	519.7	529.5	539.3	545.5	551.8	556.2	557.1	557.1
162.5°	511.9	520.2	528.6	533.4	539.7	542.7	543.6	542.9
165°	500.2	506.4	512.6	516.2	519.7	523.3	523.3	522.4
167.5°	488.9	493.7	498.0	501.2	502.8	504.8	504.6	503.5
170°	483.2	485.9	489.5	491.2	492.1	494.8	493.9	492.1
172.5°	476.8	478.8	481.6	482.7	483.6	484.8	483.9	482.9
175°	469.9	470.8	471.7	472.6	472.6	473.5	472.6	470.8
177.5°	464.9	464.9	465.7	465.7	465.7	465.7	464.9	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8

(END OF REPORT)