

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: P331424-935

Luminaire Tested: **SA2XXDIP-C1005D330U935-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331424-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C1005D330U935-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

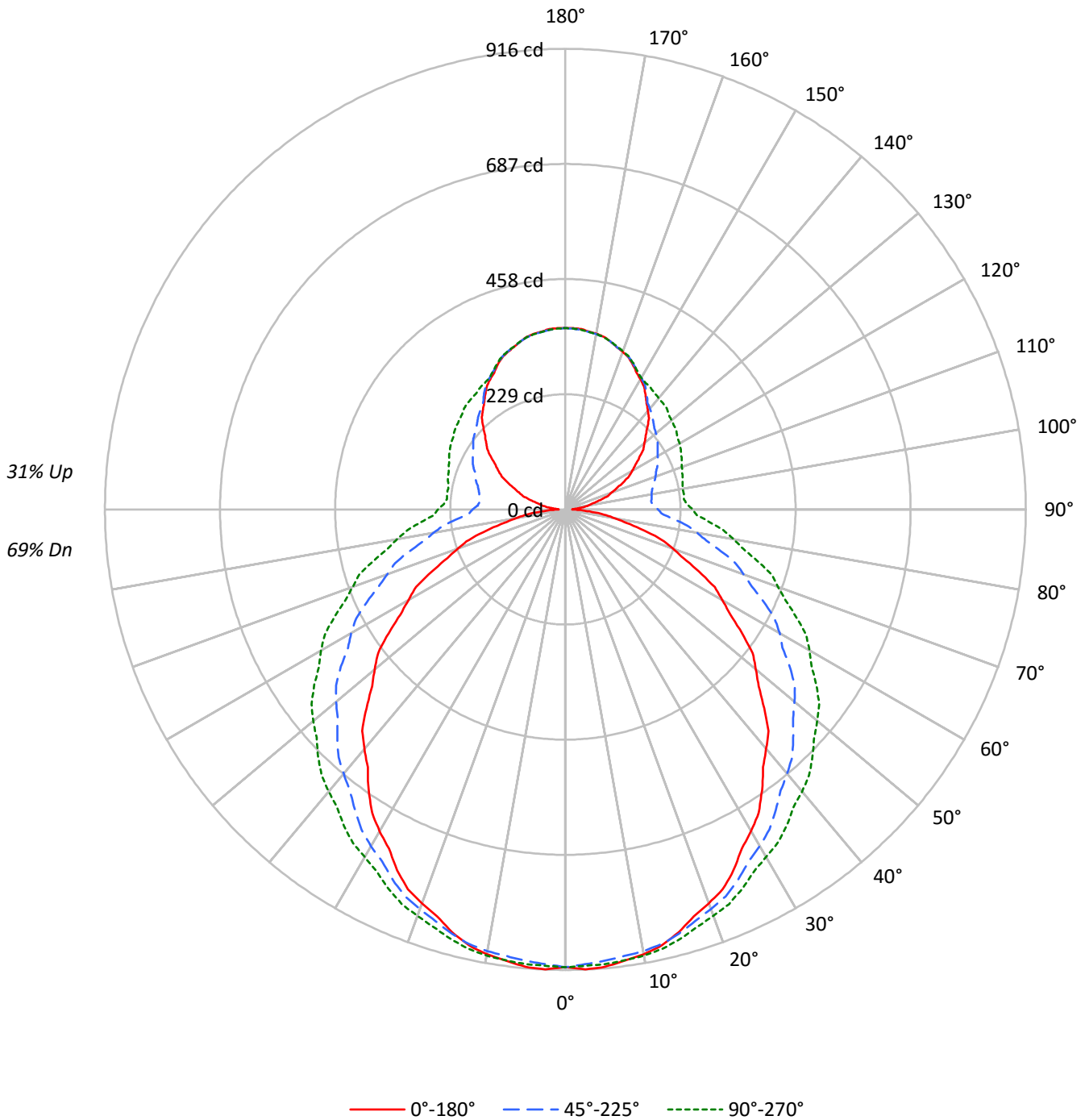
Lumens per Lamp: N/A
Luminaire Lumens: 4482.8 lumens
Efficiency: N/A
Efficacy: 90.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 49.8
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: P331424-935
CATALOG NUMBER: SA2XXDIP-C1005D330U935-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P331424-935

CATALOG NUMBER: SA2XXDIP-C1005D330U935-4F0-1E-UDD-D1

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	112	112	112	112	105	105	105	105	94	94	94	83	83	83	73	73	73	69
1	100	95	90	85	94	89	85	81	79	76	73	70	68	65	62	60	58	54
2	90	81	74	68	85	77	70	65	68	63	59	60	56	53	53	50	47	43
3	82	71	63	56	77	67	59	53	60	54	49	53	48	44	46	43	39	36
4	75	62	54	47	70	59	51	45	53	46	41	47	41	37	41	37	33	30
5	68	55	46	40	64	53	44	38	47	40	35	42	36	32	37	32	29	26
6	63	50	41	34	59	47	39	33	42	35	30	38	32	28	33	29	25	22
7	58	45	36	30	55	43	35	29	38	31	27	34	29	24	30	26	22	20
8	54	41	32	27	51	39	31	26	35	28	24	31	26	22	28	23	20	17
9	50	37	29	24	47	35	28	23	32	26	21	29	23	19	26	21	18	16
10	47	34	26	21	44	33	25	21	29	23	19	27	21	18	24	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14699	14699	14699
5°	14772	14150	14097
10°	14679	13733	13578
15°	14477	13289	13032
20°	14222	12815	12506
25°	13968	12358	12028
30°	13612	11889	11549
35°	13253	11434	11211
40°	12874	11047	10874
45°	12515	10702	10584
50°	12128	10388	10300
55°	11724	10052	10011
60°	11226	9702	9705
65°	10711	9294	9342
70°	10136	8856	8949
75°	9394	8423	8587
80°	8224	7984	8220
85°	7107	7603	7937



TEST NUMBER: P331424-935

CATALOG NUMBER: SA2XXDIP-C1005D330U935-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.3	1.9
10°-20°	247.4	5.5
20°-30°	374.9	8.4
30°-40°	456.6	10.2
40°-50°	491.2	11.0
50°-60°	477.0	10.6
60°-70°	416.5	9.3
70°-80°	320.7	7.2
80°-90°	216.7	4.8
90°-100°	171.1	3.8
100°-110°	179.2	4.0
110°-120°	192.8	4.3
120°-130°	199.4	4.4
130°-140°	195.7	4.4
140°-150°	178.4	4.0
150°-160°	147.2	3.3
160°-170°	97.6	2.2
170°-180°	34.1	0.8
0°-30°	708.5	15.8
0°-40°	1165.2	26.0
0°-60°	2133.4	47.6
0°-90°	3087.3	68.9
90°-120°	543.1	12.1
90°-150°	1116.6	24.9
90°-180°	1396.0	31.1
0°-180°	4482.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	910	910	910	910	910	
5°	913	909	901	909	908	87
15°	871	873	874	885	884	245
25°	792	801	813	828	833	364
35°	682	705	730	758	768	426
45°	560	596	641	681	695	432
55°	429	478	545	591	610	383
65°	293	358	435	488	507	291
75°	162	237	321	375	394	172
85°	48	129	214	267	288	51
90°	14	94	185	235	253	10
95°	26	92	171	219	237	26
105°	72	113	180	225	242	77
115°	127	146	202	240	255	125
125°	180	185	224	257	270	161
135°	230	234	248	274	285	178
145°	278	280	282	290	296	174
155°	318	319	320	321	320	146
165°	346	346	346	347	346	98
175°	360	359	358	360	359	34
180°	360	360	360	360	360	



TEST NUMBER: P331424-935

CATALOG NUMBER: SA2XXDIP-C1005D330U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4
2.5°	915.8	915.1	914.3	913.6	912.9	911.7	910.1	908.4	906.8	905.2	906.4
5°	913.1	912.2	911.4	910.4	909.6	908.3	906.5	904.7	903.0	901.2	903.0
7.5°	904.9	904.3	903.7	903.2	902.6	901.6	900.3	898.9	897.6	896.2	898.3
10°	898.6	898.0	897.4	896.8	896.2	895.5	894.7	893.7	892.9	892.0	894.3
12.5°	888.0	888.1	888.3	888.4	888.5	888.2	887.6	886.9	886.3	885.6	888.0
15°	870.9	871.5	872.0	872.6	873.2	873.5	873.5	873.5	873.5	873.5	876.2
17.5°	848.7	850.0	851.2	852.4	853.6	854.7	855.7	856.6	857.6	858.5	861.3
20°	834.0	835.4	836.9	838.4	839.8	841.1	842.3	843.4	844.6	845.8	849.0
22.5°	818.1	819.8	821.5	823.2	824.9	826.6	828.2	829.8	831.5	833.1	836.4
25°	791.7	793.8	795.8	797.9	800.0	802.3	804.9	807.5	810.2	812.8	816.3
27.5°	760.0	763.4	766.7	770.1	773.4	776.6	779.7	782.8	785.9	789.1	793.5
30°	738.9	742.7	746.6	750.4	754.1	758.0	761.8	765.6	769.4	773.3	777.9
32.5°	715.7	720.0	724.3	728.6	732.8	737.2	741.8	746.2	750.8	755.3	760.7
35°	682.2	687.2	692.2	697.2	702.1	707.4	713.0	718.5	724.1	729.7	736.2
37.5°	645.8	651.5	657.3	663.0	668.7	675.2	682.4	689.7	696.9	704.1	711.3
40°	621.5	627.9	634.4	640.8	647.3	654.4	662.4	670.3	678.2	686.1	693.8
42.5°	598.3	604.7	611.1	617.6	624.1	631.8	640.9	650.1	659.1	668.2	676.5
45°	559.5	567.4	575.3	583.2	591.2	600.2	610.5	620.8	631.0	641.3	650.4
47.5°	521.2	529.9	538.5	547.1	555.7	566.0	578.1	590.0	602.1	614.1	623.6
50°	494.8	503.9	513.0	522.1	531.2	542.3	555.5	568.7	581.9	595.1	605.1
52.5°	469.5	479.1	488.6	498.2	507.7	519.4	533.3	547.3	561.1	575.1	585.2
55°	428.9	439.4	450.0	460.5	471.1	484.0	499.2	514.4	529.7	544.9	555.5
57.5°	388.7	400.6	412.5	424.5	436.4	450.0	465.6	481.1	496.7	512.2	523.6
60°	360.2	372.8	385.5	398.0	410.7	425.3	442.0	458.7	475.4	492.1	503.3
62.5°	334.9	347.9	361.0	374.1	387.2	402.1	418.8	435.5	452.3	469.0	480.8
65°	292.9	307.3	321.7	336.0	350.4	366.3	383.6	400.8	418.1	435.4	447.5
67.5°	254.4	269.4	284.4	299.5	314.4	330.8	348.5	366.3	383.9	401.7	413.8
70°	227.0	242.2	257.4	272.7	287.9	304.6	322.9	341.0	359.2	377.4	389.9
72.5°	201.6	217.3	233.1	248.7	264.5	281.5	300.0	318.4	336.8	355.2	367.6
75°	162.3	178.7	195.1	211.5	228.0	245.6	264.3	283.1	301.9	320.6	333.2
77.5°	124.3	141.5	158.7	175.8	193.0	211.1	230.2	249.3	268.3	287.4	300.0
80°	98.9	116.8	134.7	152.7	170.5	189.0	208.0	227.1	246.2	265.2	277.5
82.5°	77.8	95.5	113.1	130.8	148.4	166.9	186.2	205.5	224.8	244.1	256.4
85°	47.5	65.7	83.9	102.0	120.2	138.7	157.5	176.2	195.0	213.8	226.1
87.5°	25.9	43.6	61.2	78.9	96.5	114.9	133.9	152.9	172.0	191.1	203.0
90°	13.5	31.3	49.2	67.0	84.8	103.8	124.1	144.3	164.5	184.9	196.4
92.5°	17.6	34.0	50.5	66.8	83.3	100.7	119.1	137.5	155.9	174.4	185.9
95°	26.3	40.8	55.3	69.7	84.2	100.3	118.0	135.8	153.5	171.3	182.4
97.5°	38.1	51.0	63.8	76.7	89.5	104.5	121.7	138.8	156.0	173.1	184.0
100°	47.9	59.2	70.7	82.1	93.4	107.5	124.1	140.7	157.3	173.9	184.8
102.5°	57.0	67.4	77.7	88.1	98.4	111.7	127.9	144.1	160.3	176.5	187.2
105°	72.0	80.7	89.4	98.2	106.9	118.9	134.2	149.6	165.1	180.4	190.8
107.5°	88.4	95.5	102.6	109.7	116.8	127.7	142.2	156.9	171.4	186.1	196.0
110°	98.1	104.4	110.6	116.8	123.1	133.5	147.8	162.2	176.6	191.0	200.3



TEST NUMBER: P331424-935

CATALOG NUMBER: SA2XXDIP-C1005D330U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	109.8	115.0	120.4	125.7	131.0	140.5	154.1	167.7	181.3	195.0	204.2
115°	127.0	130.6	134.2	137.8	141.5	149.8	162.9	175.9	189.0	202.1	210.8
117.5°	142.8	145.4	148.1	150.8	153.4	160.7	172.5	184.3	196.1	207.9	216.5
120°	154.2	155.9	157.6	159.4	161.1	167.6	178.7	189.9	201.1	212.3	220.5
122.5°	164.7	165.8	166.9	168.1	169.2	175.0	185.7	196.3	207.0	217.7	225.4
125°	179.7	180.3	180.9	181.5	182.1	187.0	196.2	205.3	214.6	223.7	231.4
127.5°	195.5	196.0	196.5	197.0	197.4	201.4	208.7	216.0	223.3	230.7	237.7
130°	205.5	206.1	206.7	207.3	207.8	211.2	217.2	223.3	229.3	235.3	242.2
132.5°	216.7	217.1	217.6	218.0	218.4	221.0	225.8	230.6	235.4	240.1	246.7
135°	230.4	231.1	231.9	232.6	233.3	235.2	238.3	241.4	244.4	247.5	253.7
137.5°	246.2	246.7	247.2	247.8	248.3	249.3	250.8	252.3	253.7	255.2	260.5
140°	255.6	256.0	256.2	256.6	256.9	257.5	258.4	259.3	260.3	261.2	265.9
142.5°	265.4	265.7	266.0	266.3	266.7	266.9	267.3	267.7	268.0	268.4	272.2
145°	278.0	278.5	279.0	279.5	279.9	280.3	280.8	281.2	281.5	282.0	283.8
147.5°	290.5	291.1	291.6	292.2	292.7	293.2	293.4	293.8	294.0	294.3	294.6
150°	299.0	299.5	299.8	300.2	300.7	301.0	301.3	301.5	301.8	302.0	302.3
152.5°	306.6	306.9	307.4	307.8	308.2	308.6	308.8	309.2	309.5	309.9	310.1
155°	317.9	318.1	318.3	318.5	318.7	318.9	319.1	319.3	319.5	319.7	320.0
157.5°	327.5	327.7	327.8	328.0	328.1	328.2	328.4	328.5	328.6	328.7	329.2
160°	333.4	333.6	333.6	333.8	333.9	334.1	334.1	334.2	334.2	334.3	334.7
162.5°	338.7	338.8	338.8	338.8	338.9	338.9	339.0	339.1	339.1	339.1	339.7
165°	345.9	345.8	345.7	345.7	345.6	345.5	345.5	345.5	345.5	345.5	346.0
167.5°	351.8	351.6	351.5	351.2	351.0	350.9	350.9	350.9	350.9	350.9	351.3
170°	355.0	354.8	354.6	354.4	354.2	354.0	354.0	353.9	353.9	353.8	354.2
172.5°	357.1	357.0	356.8	356.5	356.4	356.2	356.2	356.1	356.0	355.9	356.5
175°	359.9	359.6	359.5	359.2	359.0	358.9	358.8	358.6	358.4	358.3	358.8
177.5°	360.9	360.8	360.6	360.5	360.3	360.2	360.1	360.0	359.8	359.7	360.1
180°	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5



TEST NUMBER: P331424-935

CATALOG NUMBER: SA2XXDIP-C1005D330U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4
2.5°	907.5	908.7	909.9	910.2	909.7	909.3	908.8	908.4
5°	904.7	906.5	908.3	909.0	908.7	908.4	908.1	907.8
7.5°	900.4	902.6	904.7	905.6	905.3	905.0	904.7	904.4
10°	896.6	899.1	901.4	902.4	902.1	901.8	901.6	901.2
12.5°	890.4	892.7	895.0	896.0	895.8	895.4	895.2	894.9
15°	878.8	881.4	884.1	885.3	884.9	884.7	884.3	884.1
17.5°	864.0	866.8	869.5	870.9	870.9	870.9	870.9	870.9
20°	852.2	855.5	858.7	860.3	860.3	860.3	860.3	860.3
22.5°	839.6	842.8	846.0	847.9	848.3	848.9	849.3	849.8
25°	819.8	823.4	826.9	829.1	830.0	830.9	831.7	832.6
27.5°	798.0	802.5	806.9	809.4	810.1	810.7	811.4	812.0
30°	782.6	787.3	792.0	794.8	795.7	796.5	797.5	798.3
32.5°	766.1	771.5	776.9	780.3	782.0	783.5	785.1	786.7
35°	742.6	749.1	755.5	759.7	761.8	763.9	765.9	767.9
37.5°	718.4	725.6	732.7	737.4	739.5	741.8	743.9	746.1
40°	701.4	709.0	716.6	721.8	724.4	727.0	729.7	732.4
42.5°	684.8	693.2	701.5	707.0	709.6	712.3	714.9	717.6
45°	659.4	668.6	677.6	683.6	686.6	689.5	692.4	695.3
47.5°	633.1	642.6	652.1	658.5	661.7	665.0	668.1	671.4
50°	615.0	625.0	635.0	641.6	644.8	648.0	651.3	654.4
52.5°	595.5	605.6	615.9	622.7	626.1	629.6	633.1	636.5
55°	566.1	576.6	587.2	594.3	598.1	602.0	605.8	609.6
57.5°	535.0	546.4	557.8	565.3	569.2	573.1	577.0	580.8
60°	514.4	525.6	536.7	544.4	548.5	552.6	556.7	560.8
62.5°	492.7	504.5	516.3	524.2	528.1	531.9	535.8	539.7
65°	459.5	471.5	483.5	491.5	495.2	499.0	502.9	506.7
67.5°	425.9	438.1	450.2	458.3	462.3	466.2	470.3	474.2
70°	402.6	415.2	427.8	435.8	439.4	442.9	446.4	450.0
72.5°	380.0	392.4	404.7	413.0	417.2	421.5	425.7	429.9
75°	345.9	358.4	371.1	379.3	383.1	386.9	390.7	394.5
77.5°	312.5	325.0	337.6	345.9	350.0	354.1	358.3	362.3
80°	289.8	302.2	314.5	322.7	326.8	330.9	335.0	339.1
82.5°	268.7	281.0	293.3	301.4	305.3	309.2	313.1	316.9
85°	238.4	250.7	263.0	271.2	275.3	279.5	283.5	287.7
87.5°	215.0	226.9	238.8	246.7	250.5	254.3	258.0	261.7
90°	208.0	219.6	231.2	238.8	242.4	246.0	249.5	253.1
92.5°	197.4	208.9	220.4	228.0	231.5	235.1	238.6	242.1
95°	193.5	204.7	215.8	223.1	226.4	229.8	233.2	236.6
97.5°	194.8	205.7	216.5	223.7	227.1	230.6	234.0	237.5
100°	195.6	206.5	217.3	224.3	227.5	230.7	233.8	236.9
102.5°	197.9	208.5	219.2	226.1	229.3	232.4	235.6	238.8
105°	201.2	211.6	222.0	228.8	232.0	235.2	238.5	241.7
107.5°	205.9	215.8	225.7	232.1	235.1	237.9	240.8	243.7
110°	209.7	219.0	228.4	234.6	237.7	240.7	243.7	246.8



TEST NUMBER: P331424-935

CATALOG NUMBER: SA2XXDIP-C1005D330U935-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	213.4	222.7	231.9	238.0	241.1	244.2	247.3	250.3
115°	219.6	228.3	236.9	242.9	245.9	248.9	251.9	254.9
117.5°	225.0	233.5	241.9	247.6	250.5	253.2	256.0	258.8
120°	228.7	236.9	245.1	250.7	253.7	256.8	259.8	262.9
122.5°	233.2	241.1	248.9	254.1	256.7	259.3	261.9	264.5
125°	239.2	246.8	254.6	259.8	262.3	264.8	267.4	270.0
127.5°	244.7	251.8	258.7	263.5	265.8	268.2	270.5	272.9
130°	249.1	256.0	262.9	267.3	269.4	271.6	273.6	275.7
132.5°	253.1	259.7	266.1	270.4	272.6	274.7	276.9	279.0
135°	259.7	265.8	271.9	276.0	278.1	280.3	282.4	284.6
137.5°	265.9	271.2	276.6	280.1	281.8	283.5	285.2	287.0
140°	270.6	275.3	280.0	283.1	284.6	286.0	287.5	289.0
142.5°	276.0	279.7	283.5	286.1	287.3	288.6	289.9	291.1
145°	285.7	287.5	289.3	290.8	292.0	293.2	294.4	295.6
147.5°	295.1	295.4	295.8	296.2	296.7	297.1	297.6	298.0
150°	302.5	302.6	302.9	302.9	302.6	302.5	302.3	302.0
152.5°	310.4	310.6	310.9	310.9	310.6	310.4	310.1	309.9
155°	320.4	320.7	321.1	321.2	320.9	320.7	320.6	320.3
157.5°	329.6	330.1	330.5	330.6	330.3	329.9	329.7	329.3
160°	335.1	335.5	336.0	336.0	335.7	335.4	335.2	334.9
162.5°	340.1	340.5	341.0	341.0	340.8	340.4	340.1	339.8
165°	346.5	347.0	347.4	347.5	347.2	346.8	346.5	346.2
167.5°	351.8	352.2	352.8	352.8	352.5	352.1	351.7	351.4
170°	354.7	355.2	355.7	355.7	355.3	354.9	354.5	354.0
172.5°	356.9	357.4	357.8	357.9	357.5	357.1	356.7	356.3
175°	359.3	359.7	360.2	360.2	359.9	359.5	359.0	358.6
177.5°	360.4	360.7	361.0	361.0	360.7	360.4	360.1	359.7
180°	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5

(END OF REPORT)