

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: P332549-840

Luminaire Tested: **SA4XXDIP-C575D590U840-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332549-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C575D590U840-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

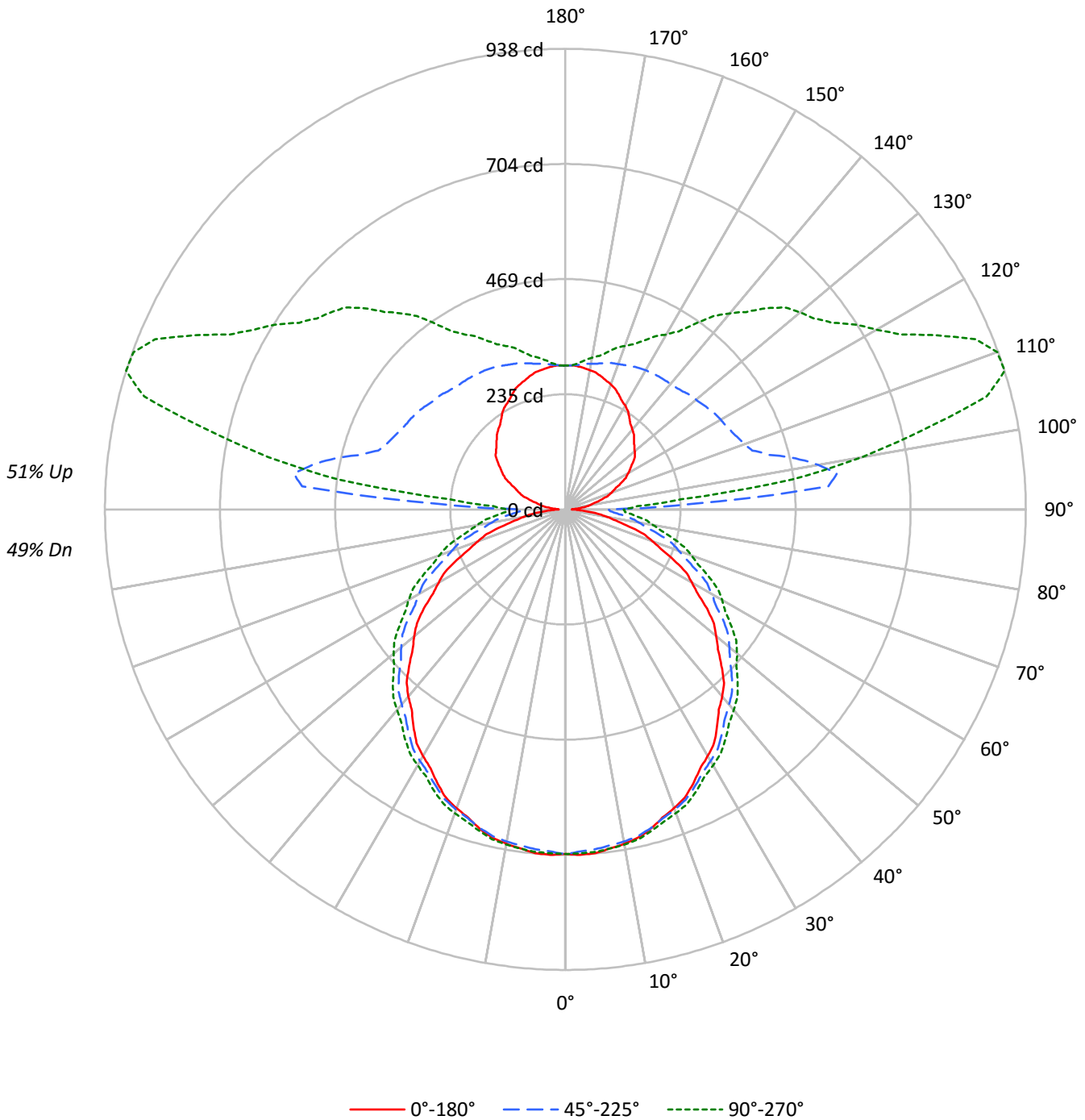
Lumens per Lamp: N/A
Luminaire Lumens: 4526.4 lumens
Efficiency: N/A
Efficacy: 138.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 32.8
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: P332549-840
CATALOG NUMBER: SA4XXDIP-C575D590U840-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





TEST NUMBER: P332549-840

CATALOG NUMBER: SA4XXDIP-C575D590U840-4F0-1E-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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39
2	87	80	73	68	80	73	68	63	62	57	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	66	57	49	44	48	42	38	40	35	32	32	29	26	22
5	67	54	46	40	61	50	43	37	43	37	32	35	31	27	29	25	23	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17
7	56	44	36	30	52	41	33	28	35	29	25	29	24	21	24	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5666	5666	5666
5°	5683	5537	5552
10°	5649	5446	5442
15°	5598	5341	5312
20°	5521	5226	5185
25°	5435	5096	5047
30°	5342	4967	4904
35°	5237	4834	4779
40°	5153	4710	4648
45°	5027	4594	4537
50°	4920	4460	4418
55°	4811	4333	4278
60°	4641	4173	4153
65°	4454	4001	3997
70°	4226	3805	3816
75°	3910	3587	3652
80°	3559	3381	3492
85°	3112	3195	3398



TEST NUMBER: P332549-840

CATALOG NUMBER: SA4XXDIP-C575D590U840-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	1.5
10°-20°	190.4	4.2
20°-30°	287.9	6.4
30°-40°	348.3	7.7
40°-50°	368.3	8.1
50°-60°	346.6	7.7
60°-70°	287.5	6.4
70°-80°	202.0	4.5
80°-90°	115.8	2.6
90°-100°	279.6	6.2
100°-110°	491.0	10.8
110°-120°	428.5	9.5
120°-130°	351.1	7.8
130°-140°	285.1	6.3
140°-150°	213.2	4.7
150°-160°	148.7	3.3
160°-170°	87.5	1.9
170°-180°	28.5	0.6
0°-30°	544.7	12.0
0°-40°	893.1	19.7
0°-60°	1607.9	35.5
0°-90°	2213.2	48.9
90°-120°	1199.1	26.5
90°-150°	2048.5	45.3
90°-180°	2313.0	51.1
0°-180°	4526.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	703	700	695	700	700	67
15°	674	674	672	678	678	190
25°	616	621	623	631	633	284
35°	539	548	556	567	570	337
45°	450	464	479	492	497	347
55°	352	369	392	407	412	314
65°	244	269	296	314	321	241
75°	135	164	197	218	226	144
85°	42	75	110	133	142	44
90°	13	49	88	111	119	9
95°	29	96	538	321	237	29
105°	74	121	430	884	888	80
115°	123	162	374	701	838	123
125°	168	200	357	587	663	150
135°	198	236	340	508	580	153
145°	227	259	331	417	461	143
155°	258	278	321	364	380	119
165°	280	289	308	326	331	79
175°	293	293	296	300	298	28
180°	293	293	293	293	293	



TEST NUMBER: P332549-840

CATALOG NUMBER: SA4XXDIP-C575D590U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	704.3	703.9	703.5	703.0	702.6	701.9	700.7	699.6	698.4	697.3	698.3
5°	702.6	702.1	701.5	700.9	700.4	699.5	698.3	697.1	695.9	694.7	696.1
7.5°	696.6	696.2	695.9	695.6	695.3	694.7	693.7	692.7	691.6	690.5	692.2
10°	691.6	691.4	691.2	691.1	690.8	690.3	689.4	688.5	687.7	686.8	688.4
12.5°	684.6	684.6	684.6	684.5	684.5	684.2	683.6	683.0	682.4	681.8	683.2
15°	673.5	673.7	673.8	674.0	674.2	674.0	673.5	673.0	672.4	671.9	673.5
17.5°	658.2	658.7	659.2	659.7	660.4	660.6	660.5	660.4	660.2	660.1	661.7
20°	647.5	648.0	648.5	649.1	649.6	649.9	650.2	650.4	650.5	650.7	652.4
22.5°	635.6	636.2	636.9	637.5	638.2	638.7	639.0	639.3	639.6	640.0	641.8
25°	616.1	617.1	618.2	619.2	620.3	621.1	621.6	622.1	622.7	623.2	625.1
27.5°	594.4	595.9	597.4	599.1	600.6	601.7	602.5	603.3	604.1	604.9	606.7
30°	580.0	581.4	582.7	584.1	585.5	586.8	588.0	589.3	590.5	591.8	593.7
32.5°	564.2	565.9	567.5	569.3	571.0	572.5	573.8	575.2	576.5	577.9	580.1
35°	539.1	541.2	543.3	545.3	547.4	549.4	551.1	552.9	554.6	556.3	558.9
37.5°	513.8	516.1	518.6	521.0	523.4	525.7	527.9	530.1	532.2	534.3	536.8
40°	497.5	499.7	502.0	504.2	506.5	508.9	511.3	513.7	516.2	518.7	521.3
42.5°	478.6	481.1	483.6	486.3	488.8	491.5	494.3	497.2	500.1	502.9	505.8
45°	449.5	452.8	456.2	459.5	462.7	466.1	469.4	472.7	476.1	479.4	482.3
47.5°	421.7	425.1	428.5	431.9	435.4	439.0	442.8	446.7	450.5	454.3	457.5
50°	401.5	405.4	409.2	413.1	417.0	420.8	424.6	428.5	432.3	436.2	439.6
52.5°	381.4	385.3	389.1	392.9	396.8	400.9	405.4	409.7	414.1	418.5	422.0
55°	352.0	355.7	359.4	363.0	366.7	371.1	376.4	381.6	386.9	392.1	395.7
57.5°	319.2	323.8	328.3	332.9	337.4	342.2	347.4	352.6	357.9	363.0	367.2
60°	297.8	302.4	306.9	311.4	316.0	321.1	326.9	332.6	338.4	344.2	348.2
62.5°	277.1	282.1	287.0	292.0	296.9	302.3	308.0	313.8	319.6	325.4	329.3
65°	243.6	249.2	254.8	260.3	266.0	271.8	277.6	283.6	289.5	295.5	299.8
67.5°	211.4	217.3	223.3	229.2	235.1	241.3	247.6	254.0	260.3	266.7	271.1
70°	189.3	195.3	201.3	207.2	213.2	219.4	226.0	232.7	239.3	246.0	250.6
72.5°	168.0	174.1	180.2	186.2	192.3	198.8	205.9	213.0	220.0	227.1	231.7
75°	135.1	141.6	148.0	154.5	161.0	167.9	175.2	182.6	190.0	197.2	202.2
77.5°	104.5	111.4	118.3	125.0	131.9	139.2	146.8	154.5	162.2	169.9	174.8
80°	85.6	92.6	99.7	106.6	113.6	120.9	128.7	136.3	144.0	151.7	156.9
82.5°	66.8	74.0	81.3	88.6	95.8	103.3	111.0	118.7	126.3	134.1	139.5
85°	41.6	49.0	56.4	63.6	71.0	78.6	86.4	94.3	102.2	110.0	115.2
87.5°	23.3	30.7	38.2	45.4	52.7	60.1	68.4	76.0	83.9	91.8	96.7
90°	13.1	21.3	30.0	37.6	45.1	52.4	63.3	70.9	79.5	88.2	92.7
92.5°	18.5	27.8	39.5	52.8	67.5	86.3	123.2	175.4	226.4	256.7	231.2
95°	29.2	36.8	48.3	61.5	81.1	111.7	169.1	270.6	415.5	537.9	555.8
97.5°	43.4	48.4	58.3	70.1	86.9	113.2	159.0	244.0	388.0	558.0	674.6
100°	52.4	57.0	65.5	77.0	92.5	116.5	157.3	229.3	353.7	522.9	675.1
102.5°	61.6	66.6	74.1	84.5	99.0	121.8	159.3	223.2	329.9	480.6	637.2
105°	74.4	79.7	86.0	96.4	110.4	132.0	166.1	220.5	307.5	429.8	569.6
107.5°	90.2	94.2	100.0	110.2	123.0	143.9	175.4	225.1	300.1	399.4	514.2
110°	100.2	103.8	109.1	118.5	131.3	151.1	182.6	229.0	298.5	388.1	486.0



TEST NUMBER: P332549-840

CATALOG NUMBER: SA4XXDIP-C575D590U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	109.7	113.0	118.6	127.1	139.7	159.3	189.5	233.4	298.4	380.8	468.5
115°	123.4	126.6	132.3	139.7	152.2	171.3	200.0	240.0	299.2	374.0	450.4
117.5°	138.5	141.0	145.5	152.8	164.0	183.2	210.3	247.3	300.5	368.6	439.5
120°	147.9	149.7	154.2	161.1	171.4	190.3	217.2	252.3	301.6	365.5	432.9
122.5°	157.1	158.4	162.6	168.5	179.4	197.4	224.2	257.0	303.0	361.9	426.1
125°	168.4	170.6	173.9	180.1	190.9	209.0	234.2	265.0	305.7	357.3	415.9
127.5°	179.0	180.7	184.7	191.8	203.0	220.9	244.2	271.9	306.9	351.3	402.8
130°	184.4	186.5	191.0	199.4	210.2	228.2	250.5	275.9	308.0	347.7	394.7
132.5°	190.4	192.1	197.8	205.9	217.5	234.4	256.2	280.4	309.3	344.8	387.4
135°	198.0	200.4	206.1	215.9	227.9	243.6	263.8	285.8	310.6	339.5	375.7
137.5°	206.4	208.4	214.6	223.8	236.1	250.6	268.9	288.9	310.5	335.8	365.9
140°	212.4	214.0	220.2	229.7	241.7	255.5	273.0	291.5	311.3	333.4	360.4
142.5°	218.2	219.9	225.8	235.1	246.7	259.9	276.7	293.7	312.1	332.1	356.2
145°	227.2	228.7	234.3	242.2	253.0	265.6	280.5	296.1	312.9	330.6	350.1
147.5°	237.4	237.8	242.8	250.9	259.7	271.1	285.2	298.7	313.4	328.6	345.0
150°	243.9	244.3	248.7	255.5	264.0	274.8	287.5	300.1	313.4	327.2	341.6
152.5°	249.2	249.3	253.9	260.3	268.0	278.0	289.3	301.0	312.5	324.9	337.9
155°	257.5	258.1	261.6	267.3	273.7	282.3	292.1	301.8	311.0	321.4	332.3
157.5°	265.7	265.7	268.9	273.4	278.9	285.7	294.1	301.8	309.6	317.9	326.8
160°	270.7	270.7	273.1	277.1	281.7	288.0	295.0	301.8	308.2	315.1	322.7
162.5°	275.4	274.9	276.7	280.3	284.5	289.4	295.9	301.8	306.8	312.4	318.9
165°	280.5	280.5	281.7	284.6	287.5	290.9	296.1	300.7	304.2	308.2	312.9
167.5°	285.7	285.2	285.7	287.9	289.5	292.2	296.0	299.3	301.4	304.1	307.3
170°	288.0	287.5	288.0	289.7	290.9	292.7	295.5	298.4	299.5	301.2	303.6
172.5°	290.3	289.7	289.8	291.1	291.9	293.1	295.1	297.5	297.7	298.5	300.3
175°	292.7	292.1	292.1	292.7	293.3	293.3	294.4	296.1	295.5	295.5	296.7
177.5°	293.7	293.3	292.8	293.3	293.3	293.3	293.7	294.6	293.7	293.7	294.2
180°	293.3	293.3	293.3	293.3	293.3	293.3	293.3	293.3	293.3	293.3	293.3



TEST NUMBER: P332549-840

CATALOG NUMBER: SA4XXDIP-C575D590U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	699.3	700.2	701.3	701.7	701.6	701.4	701.3	701.1
5°	697.5	698.8	700.2	700.8	700.7	700.5	700.3	700.1
7.5°	693.8	695.3	696.9	697.6	697.4	697.2	697.0	696.9
10°	689.9	691.6	693.1	693.8	693.7	693.5	693.3	693.1
12.5°	684.7	686.1	687.5	688.2	688.2	688.1	688.1	688.1
15°	675.0	676.6	678.1	678.8	678.7	678.5	678.3	678.1
17.5°	663.3	664.9	666.5	667.2	667.1	667.0	666.8	666.7
20°	654.2	655.9	657.6	658.5	658.5	658.5	658.5	658.5
22.5°	643.5	645.2	646.9	648.0	648.2	648.5	648.8	649.1
25°	627.0	628.9	630.9	631.9	632.1	632.3	632.4	632.6
27.5°	608.5	610.3	612.1	613.1	613.3	613.5	613.7	613.9
30°	595.6	597.5	599.5	600.6	600.9	601.3	601.6	602.0
32.5°	582.3	584.5	586.7	587.9	588.3	588.7	589.1	589.4
35°	561.3	563.7	566.1	567.6	568.2	568.7	569.2	569.8
37.5°	539.4	541.8	544.3	545.8	546.3	546.9	547.4	548.1
40°	523.9	526.5	529.2	530.8	531.5	532.2	532.9	533.6
42.5°	508.8	511.6	514.5	516.2	516.8	517.4	518.0	518.5
45°	485.3	488.3	491.2	493.1	494.0	494.9	495.7	496.7
47.5°	460.5	463.6	466.7	468.7	469.8	470.8	471.9	472.9
50°	443.1	446.7	450.1	452.4	453.4	454.4	455.6	456.6
52.5°	425.6	429.0	432.5	434.7	435.9	436.9	437.9	439.0
55°	399.1	402.6	406.1	408.4	409.4	410.5	411.5	412.5
57.5°	371.3	375.6	379.7	382.2	383.2	384.2	385.2	386.2
60°	352.2	356.3	360.2	362.9	364.4	365.8	367.2	368.6
62.5°	333.4	337.4	341.4	344.1	345.5	346.9	348.3	349.7
65°	304.2	308.6	313.0	315.8	317.2	318.6	320.0	321.4
67.5°	275.6	280.0	284.5	287.3	288.7	290.0	291.4	292.8
70°	255.4	260.1	264.8	267.8	269.0	270.2	271.5	272.7
72.5°	236.2	240.9	245.4	248.3	249.7	251.1	252.5	253.8
75°	207.0	211.9	216.8	220.0	221.6	223.2	224.8	226.3
77.5°	179.9	184.8	189.8	193.1	194.7	196.4	198.0	199.8
80°	162.2	167.3	172.6	175.9	177.3	178.7	180.2	181.6
82.5°	144.8	150.2	155.6	159.1	160.6	162.1	163.6	165.2
85°	120.5	125.7	131.0	134.5	136.2	137.9	139.7	141.5
87.5°	101.9	107.1	112.3	115.6	117.2	118.9	120.4	121.9
90°	98.3	103.9	109.6	112.8	114.8	116.7	117.5	119.0
92.5°	197.0	173.9	161.5	153.1	147.7	146.0	145.4	146.8
95°	504.6	420.1	347.6	294.9	268.2	252.0	243.2	237.2
97.5°	703.4	674.7	623.0	565.8	526.0	492.8	477.1	466.6
100°	763.9	780.1	756.6	717.0	668.0	634.2	618.1	614.7
102.5°	757.3	819.0	831.7	817.0	787.6	763.5	746.6	744.3
105°	705.8	809.8	871.2	897.8	900.3	897.1	890.4	888.4
107.5°	635.3	745.7	830.3	884.4	914.2	928.6	935.6	938.4
110°	592.6	696.3	783.9	849.9	892.2	917.8	929.6	936.1



TEST NUMBER: P332549-840

CATALOG NUMBER: SA4XXDIP-C575D590U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	560.2	652.2	735.0	800.9	848.8	879.5	895.3	905.1
115°	526.2	600.9	672.2	730.0	776.7	812.5	832.1	838.0
117.5°	506.8	569.1	625.7	675.1	715.3	745.8	765.8	770.8
120°	497.0	554.0	603.6	646.9	681.2	707.9	724.3	732.1
122.5°	488.3	543.5	589.0	627.1	656.1	679.0	693.0	700.5
125°	474.5	527.4	570.5	604.3	628.4	646.2	658.1	662.7
127.5°	458.0	508.5	551.2	583.4	607.8	623.8	634.3	638.9
130°	445.6	494.2	536.5	569.2	593.8	609.3	619.6	624.1
132.5°	433.1	478.9	520.1	552.7	576.8	594.2	604.0	608.4
135°	414.8	455.0	492.9	523.6	547.8	564.9	575.2	579.7
137.5°	398.6	432.8	464.9	492.7	515.1	531.9	540.4	545.4
140°	389.2	418.6	446.8	472.5	493.5	507.1	516.0	521.5
142.5°	380.9	406.8	431.0	453.3	471.9	484.4	492.3	496.2
145°	369.6	390.3	408.6	425.6	440.7	451.2	457.7	461.2
147.5°	360.3	376.0	390.0	403.0	414.1	423.1	428.1	429.7
150°	355.5	368.7	380.2	390.6	399.8	407.3	410.7	411.3
152.5°	350.3	361.7	372.3	380.9	388.7	394.9	396.9	397.5
155°	342.7	351.9	360.6	367.5	373.3	377.9	379.6	379.6
157.5°	334.6	342.3	349.5	355.1	359.5	362.9	364.0	364.0
160°	329.5	335.9	342.1	346.8	350.2	353.8	354.3	354.3
162.5°	324.5	329.8	334.8	339.0	341.5	345.0	345.6	345.1
165°	317.4	320.8	324.9	327.8	330.1	332.3	331.8	331.2
167.5°	310.6	313.3	316.5	318.2	319.4	320.8	320.7	320.3
170°	306.5	308.2	310.5	312.3	313.4	314.0	313.4	313.4
172.5°	302.8	304.1	305.5	306.7	307.4	308.0	307.4	306.5
175°	297.8	298.4	299.5	299.5	299.5	300.7	299.5	298.4
177.5°	294.6	295.1	295.1	295.5	295.1	295.5	294.6	293.7
180°	293.3	293.3	293.3	293.3	293.3	293.3	293.3	293.3

(END OF REPORT)