

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: P331306-935

Luminaire Tested: **SA2XXDIP-C485D725U935-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331306-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D725U935-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

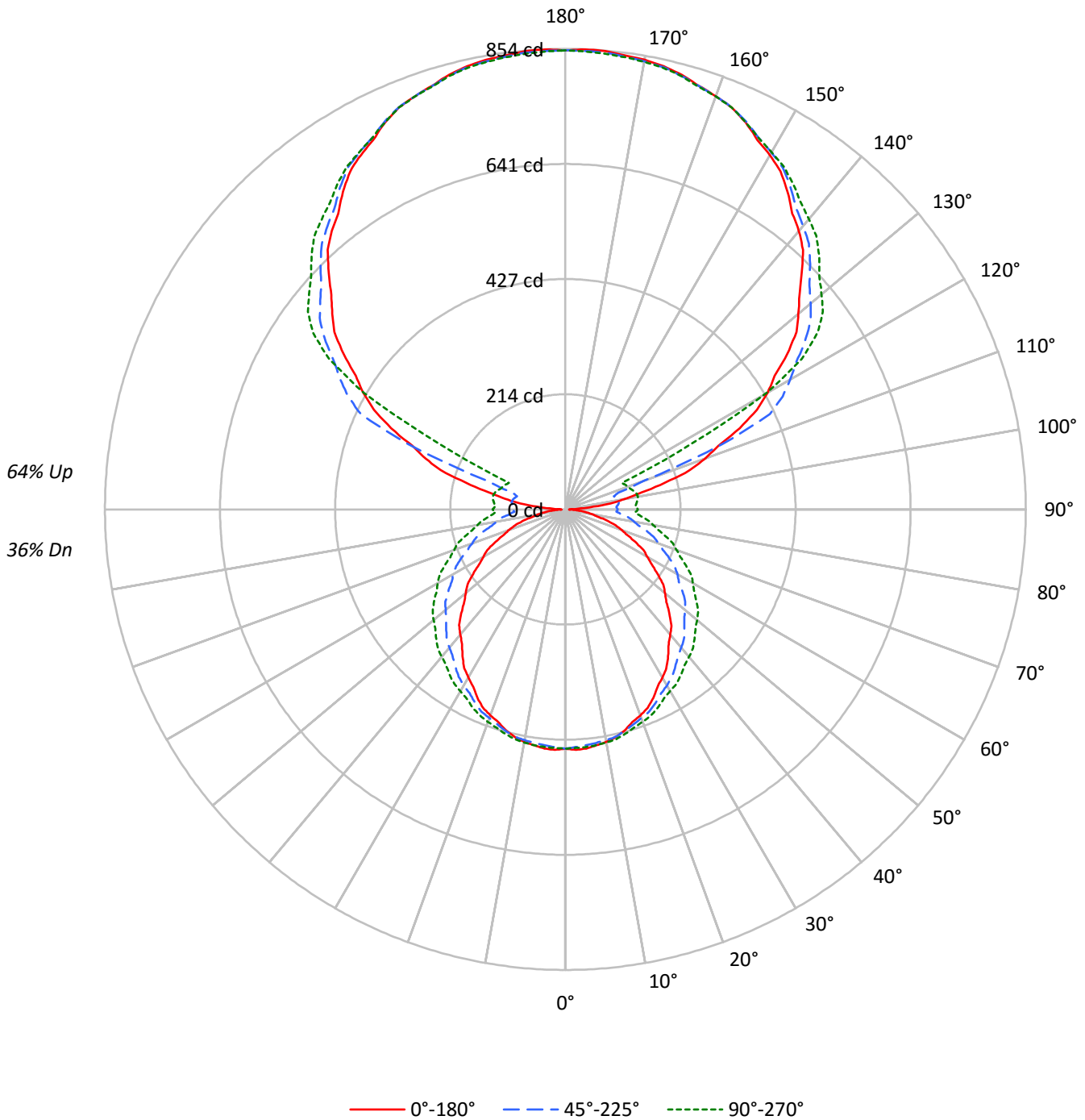
Lumens per Lamp: N/A
Luminaire Lumens: 4189.2 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 38.4
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



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Luminous Intensity Polar Plot





TEST NUMBER: P331306-935

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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	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	76	76	76	59	59	59	43	43	43	36				36
1	94	89	85	81	84	80	77	74	64	62	60	50	48	47	36	35	34				28	
2	85	77	70	65	76	70	64	59	56	52	48	43	40	38	31	30	28				23	
3	77	67	60	54	69	61	54	49	49	44	40	38	34	32	27	25	23				19	
4	70	59	51	45	63	54	47	41	43	38	34	33	30	27	24	22	20				16	
5	64	52	44	38	58	48	40	35	38	33	29	30	26	23	22	19	17				13	
6	59	47	39	33	53	43	35	30	34	29	25	27	23	20	20	17	15				12	
7	54	42	34	29	49	38	31	26	31	26	22	24	20	17	18	15	13				10	
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	14	12				9	
9	47	35	27	22	42	32	25	20	26	21	17	20	16	14	15	12	10				8	
10	44	32	24	20	39	29	22	18	24	19	15	19	15	12	14	11	9				7	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7164	7164	7164
5°	7199	6896	6870
10°	7153	6692	6617
15°	7055	6477	6350
20°	6930	6245	6094
25°	6807	6022	5862
30°	6634	5793	5628
35°	6458	5572	5464
40°	6275	5384	5299
45°	6100	5215	5159
50°	5912	5062	5019
55°	5713	4898	4878
60°	5473	4730	4729
65°	5222	4530	4552
70°	4938	4315	4361
75°	4578	4106	4186
80°	4008	3889	4005
85°	3471	3705	3868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.0	1.0
10°-20°	120.6	2.9
20°-30°	182.7	4.4
30°-40°	222.5	5.3
40°-50°	239.4	5.7
50°-60°	232.5	5.5
60°-70°	203.0	4.8
70°-80°	156.3	3.7
80°-90°	107.0	2.6
90°-100°	100.6	2.4
100°-110°	156.9	3.7
110°-120°	313.2	7.5
120°-130°	478.9	11.4
130°-140°	496.8	11.9
140°-150°	455.6	10.9
150°-160°	365.1	8.7
160°-170°	235.3	5.6
170°-180°	81.0	1.9
0°-30°	345.3	8.2
0°-40°	567.8	13.6
0°-60°	1039.7	24.8
0°-90°	1505.9	35.9
90°-120°	570.7	13.6
90°-150°	2001.9	47.8
90°-180°	2683.0	64.0
0°-180°	4189.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	444	444	444	444	444	
5°	445	443	439	443	442	42
15°	424	426	426	431	431	119
25°	386	390	396	404	406	177
35°	332	343	356	369	374	208
45°	273	290	312	332	339	210
55°	209	233	266	288	297	187
65°	143	175	212	238	247	142
75°	79	115	156	183	192	84
85°	23	63	104	130	140	25
90°	7	51	97	125	135	6
95°	45	57	98	124	133	53
105°	190	218	93	121	132	204
115°	357	376	419	165	116	351
125°	502	511	542	563	572	448
135°	620	630	642	661	666	479
145°	719	719	729	736	737	450
155°	791	787	793	796	792	365
165°	834	830	832	836	832	236
175°	853	849	850	854	848	81
180°	851	851	851	851	851	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	446.3	445.9	445.6	445.2	444.9	444.3	443.5	442.7	442.0	441.1	441.7
5°	445.0	444.5	444.1	443.7	443.2	442.6	441.8	440.9	440.1	439.2	440.1
7.5°	441.0	440.7	440.4	440.1	439.9	439.4	438.7	438.1	437.4	436.7	437.7
10°	437.9	437.6	437.3	437.0	436.8	436.4	436.0	435.6	435.1	434.7	435.8
12.5°	432.7	432.8	432.9	432.9	433.0	432.8	432.6	432.2	431.9	431.6	432.7
15°	424.4	424.6	425.0	425.2	425.5	425.7	425.7	425.7	425.7	425.7	427.0
17.5°	413.6	414.2	414.8	415.4	416.0	416.6	417.0	417.4	417.9	418.4	419.7
20°	406.4	407.1	407.9	408.5	409.2	409.9	410.4	411.0	411.6	412.2	413.7
22.5°	398.6	399.5	400.4	401.1	402.0	402.8	403.6	404.4	405.2	406.0	407.6
25°	385.8	386.8	387.8	388.8	389.8	391.0	392.3	393.6	394.9	396.1	397.8
27.5°	370.4	372.0	373.7	375.3	376.9	378.5	380.0	381.5	383.0	384.5	386.7
30°	360.1	362.0	363.8	365.7	367.6	369.4	371.3	373.1	375.0	376.8	379.1
32.5°	348.8	350.9	352.9	355.1	357.1	359.3	361.4	363.7	365.8	368.1	370.7
35°	332.4	334.8	337.3	339.8	342.2	344.7	347.4	350.2	352.8	355.6	358.7
37.5°	314.7	317.5	320.3	323.1	325.9	329.1	332.6	336.0	339.6	343.1	346.6
40°	302.9	306.0	309.2	312.3	315.5	318.9	322.8	326.7	330.5	334.4	338.1
42.5°	291.5	294.7	297.8	301.0	304.1	307.9	312.4	316.8	321.2	325.6	329.7
45°	272.7	276.5	280.3	284.2	288.1	292.5	297.5	302.5	307.5	312.5	316.9
47.5°	254.0	258.2	262.4	266.6	270.8	275.9	281.7	287.6	293.4	299.3	303.9
50°	241.2	245.6	250.0	254.4	258.8	264.2	270.7	277.2	283.6	290.0	294.9
52.5°	228.8	233.4	238.1	242.8	247.5	253.1	259.9	266.7	273.5	280.3	285.2
55°	209.0	214.1	219.3	224.4	229.5	235.8	243.3	250.7	258.1	265.5	270.7
57.5°	189.4	195.3	201.0	206.8	212.7	219.3	226.9	234.5	242.0	249.6	255.2
60°	175.6	181.7	187.9	194.0	200.1	207.2	215.4	223.5	231.7	239.9	245.3
62.5°	163.2	169.5	176.0	182.4	188.7	196.0	204.1	212.2	220.4	228.5	234.3
65°	142.8	149.7	156.8	163.8	170.7	178.5	186.9	195.4	203.8	212.2	218.1
67.5°	124.0	131.3	138.6	145.9	153.3	161.2	169.9	178.5	187.1	195.7	201.6
70°	110.6	118.0	125.4	132.9	140.3	148.4	157.3	166.2	175.0	183.9	190.0
72.5°	98.2	105.9	113.6	121.2	128.9	137.2	146.2	155.2	164.1	173.1	179.2
75°	79.1	87.1	95.1	103.1	111.1	119.7	128.8	137.9	147.1	156.3	162.4
77.5°	60.6	69.0	77.3	85.7	94.1	102.9	112.2	121.5	130.8	140.1	146.2
80°	48.2	56.9	65.7	74.4	83.1	92.1	101.4	110.6	119.9	129.2	135.3
82.5°	38.0	46.6	55.1	63.7	72.3	81.4	90.7	100.1	109.5	119.0	124.9
85°	23.2	32.0	40.9	49.8	58.5	67.6	76.7	85.8	95.1	104.2	110.2
87.5°	12.7	21.5	30.4	39.2	48.0	57.1	66.5	75.9	85.2	94.5	100.5
90°	7.1	16.9	26.6	36.4	46.2	56.2	66.5	76.7	87.0	97.2	103.6
92.5°	18.3	25.9	33.5	41.1	48.6	57.2	66.5	75.9	85.2	94.5	100.5
95°	45.2	47.4	49.6	51.7	54.0	59.8	69.4	78.9	88.4	98.0	104.1
97.5°	83.9	77.2	70.4	63.7	56.9	58.8	69.2	79.6	90.1	100.6	106.4
100°	113.5	100.0	86.6	73.1	59.7	58.1	68.4	78.8	89.1	99.4	105.8
102.5°	145.5	146.4	147.2	148.1	149.0	143.5	131.8	120.2	108.5	96.8	103.4
105°	190.5	198.7	207.0	215.2	223.4	212.6	182.7	152.7	122.8	92.9	99.4
107.5°	242.5	249.1	255.7	262.3	269.0	253.4	215.7	178.1	140.3	102.6	105.9
110°	275.4	281.1	286.9	292.7	298.3	284.9	252.4	219.8	187.3	154.7	145.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	306.9	311.9	316.8	321.8	326.7	327.6	324.5	321.4	318.3	315.2	269.8
115°	356.7	360.6	364.5	368.4	372.3	379.2	389.0	398.9	408.7	418.6	359.5
117.5°	400.5	404.2	407.8	411.5	415.1	421.0	429.3	437.6	445.9	454.2	443.2
120°	433.1	435.7	438.3	440.9	443.6	448.9	457.1	465.3	473.5	481.6	487.3
122.5°	460.6	463.0	465.5	467.9	470.2	475.4	483.5	491.5	499.6	507.6	512.6
125°	502.0	503.8	505.6	507.4	509.1	513.6	520.8	528.0	535.1	542.3	547.1
127.5°	540.1	541.9	543.7	545.5	547.4	551.1	556.7	562.4	568.0	573.6	578.6
130°	564.2	566.3	568.3	570.3	572.4	575.7	580.2	584.7	589.2	593.7	598.7
132.5°	588.8	590.6	592.3	594.0	595.7	598.5	602.4	606.1	609.9	613.8	618.4
135°	620.3	622.4	624.7	626.8	629.0	631.5	634.1	636.7	639.4	642.0	646.4
137.5°	652.6	654.1	655.7	657.1	658.7	660.4	662.5	664.4	666.5	668.5	672.5
140°	673.8	674.8	675.7	676.7	677.6	679.0	680.8	682.6	684.4	686.1	689.7
142.5°	691.6	692.4	693.3	694.1	694.9	696.2	698.0	699.8	701.6	703.4	706.4
145°	718.8	718.6	718.5	718.3	718.2	719.3	721.6	723.9	726.3	728.6	730.4
147.5°	743.0	742.5	742.0	741.5	741.0	741.8	744.2	746.4	748.7	751.1	751.8
150°	758.8	757.9	756.9	756.0	754.9	755.6	757.8	759.9	762.2	764.3	765.2
152.5°	772.1	771.0	770.0	768.9	767.8	768.4	770.4	772.5	774.6	776.6	777.5
155°	791.4	790.2	788.9	787.7	786.5	786.7	788.3	790.0	791.6	793.2	794.1
157.5°	806.6	805.6	804.5	803.5	802.5	802.5	803.7	804.8	805.9	807.1	808.0
160°	815.5	814.6	813.8	813.0	812.2	812.2	813.0	813.8	814.6	815.5	816.3
162.5°	823.4	822.5	821.7	820.9	820.0	820.0	820.7	821.4	822.2	822.9	823.8
165°	834.0	833.1	832.3	831.5	830.6	830.4	830.9	831.3	831.6	832.1	833.0
167.5°	841.8	841.0	840.2	839.4	838.5	838.3	838.7	839.0	839.5	839.8	840.8
170°	846.3	845.4	844.6	843.8	843.0	842.7	843.0	843.3	843.5	843.8	844.7
172.5°	849.2	848.3	847.6	846.7	845.9	845.7	845.9	846.2	846.4	846.7	847.7
175°	853.0	852.0	851.1	850.2	849.2	848.9	849.1	849.4	849.6	850.0	850.9
177.5°	853.7	852.9	852.1	851.4	850.6	850.2	850.3	850.5	850.6	850.7	851.4
180°	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	442.3	442.8	443.4	443.6	443.3	443.2	442.9	442.6
5°	440.9	441.8	442.6	443.0	442.8	442.7	442.6	442.4
7.5°	438.8	439.8	440.8	441.3	441.2	441.0	440.8	440.7
10°	437.0	438.1	439.3	439.8	439.6	439.5	439.4	439.2
12.5°	433.9	435.1	436.2	436.7	436.5	436.4	436.3	436.1
15°	428.3	429.6	430.8	431.4	431.3	431.1	430.9	430.8
17.5°	421.0	422.4	423.7	424.4	424.4	424.4	424.4	424.4
20°	415.3	416.9	418.4	419.2	419.2	419.2	419.2	419.2
22.5°	409.1	410.7	412.3	413.2	413.5	413.6	413.9	414.1
25°	399.5	401.2	402.9	404.1	404.5	404.9	405.4	405.8
27.5°	388.9	391.1	393.2	394.4	394.8	395.1	395.4	395.7
30°	381.4	383.7	386.0	387.3	387.7	388.1	388.6	389.0
32.5°	373.3	375.9	378.6	380.3	381.1	381.9	382.6	383.4
35°	361.9	365.1	368.2	370.2	371.3	372.2	373.2	374.3
37.5°	350.1	353.6	357.1	359.3	360.4	361.4	362.5	363.6
40°	341.8	345.5	349.2	351.7	353.0	354.3	355.6	356.9
42.5°	333.7	337.8	341.8	344.6	345.8	347.1	348.4	349.7
45°	321.4	325.8	330.2	333.1	334.6	336.0	337.4	338.9
47.5°	308.5	313.1	317.8	320.9	322.4	324.0	325.6	327.2
50°	299.7	304.5	309.4	312.6	314.3	315.8	317.4	318.9
52.5°	290.2	295.2	300.1	303.4	305.1	306.9	308.5	310.2
55°	275.9	281.0	286.1	289.6	291.5	293.3	295.2	297.0
57.5°	260.7	266.2	271.8	275.5	277.4	279.3	281.2	283.1
60°	250.7	256.1	261.6	265.3	267.3	269.3	271.3	273.3
62.5°	240.0	245.8	251.6	255.5	257.4	259.2	261.1	263.0
65°	223.9	229.8	235.7	239.5	241.3	243.2	245.0	246.9
67.5°	207.6	213.4	219.4	223.3	225.2	227.2	229.2	231.1
70°	196.2	202.3	208.4	212.4	214.1	215.9	217.6	219.3
72.5°	185.2	191.2	197.3	201.3	203.3	205.3	207.4	209.5
75°	168.6	174.7	180.8	184.9	186.7	188.6	190.4	192.3
77.5°	152.3	158.4	164.5	168.6	170.6	172.5	174.6	176.6
80°	141.3	147.2	153.3	157.2	159.3	161.3	163.2	165.2
82.5°	131.0	137.0	142.9	146.9	148.8	150.7	152.6	154.5
85°	116.1	122.2	128.2	132.2	134.1	136.2	138.2	140.2
87.5°	106.5	112.4	118.4	122.3	124.2	126.1	128.0	129.8
90°	110.0	116.4	122.8	127.0	129.0	131.0	132.9	134.9
92.5°	106.4	112.4	118.4	122.3	124.2	126.1	127.9	129.8
95°	110.2	116.3	122.4	126.3	127.9	129.4	131.0	132.6
97.5°	112.3	118.0	123.9	127.8	129.6	131.5	133.3	135.2
100°	112.2	118.6	124.9	129.1	130.9	132.8	134.6	136.5
102.5°	109.9	116.6	123.2	127.4	129.4	131.4	133.3	135.3
105°	105.9	112.4	118.9	123.2	125.4	127.4	129.6	131.6
107.5°	109.2	112.4	115.7	118.4	120.5	122.6	124.8	126.9
110°	136.5	127.3	118.3	114.8	116.9	119.0	121.1	123.2



TEST NUMBER: P331306-935

CATALOG NUMBER: SA2XXDIP-C485D725U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	224.5	179.1	133.8	112.1	114.1	116.1	118.1	120.1
115°	300.4	241.3	182.3	148.6	140.3	132.0	123.7	115.5
117.5°	432.0	420.9	409.8	388.8	357.9	326.9	296.0	265.1
120°	492.9	498.6	504.3	498.6	481.7	464.9	447.9	431.0
122.5°	517.4	522.3	527.2	528.5	526.2	524.0	521.8	519.5
125°	551.9	556.7	561.5	564.8	566.5	568.2	569.9	571.6
127.5°	583.5	588.5	593.4	596.5	597.9	599.3	600.5	601.9
130°	603.6	608.6	613.5	616.4	617.4	618.5	619.4	620.4
132.5°	623.0	627.6	632.1	635.0	636.0	637.0	638.0	639.0
135°	650.8	655.1	659.5	662.2	663.1	663.9	664.8	665.6
137.5°	676.5	680.4	684.4	686.6	687.2	687.7	688.2	688.6
140°	693.2	696.7	700.3	702.1	702.2	702.4	702.6	702.7
142.5°	709.3	712.2	715.1	716.7	716.8	716.8	716.9	717.0
145°	732.3	734.1	735.9	736.8	736.8	736.8	736.9	736.9
147.5°	752.7	753.5	754.3	754.7	754.4	754.1	754.0	753.7
150°	765.9	766.8	767.6	767.7	767.0	766.3	765.6	764.9
152.5°	778.3	779.1	780.0	779.9	779.0	778.1	777.2	776.3
155°	795.0	795.7	796.6	796.4	795.3	794.3	793.2	792.0
157.5°	808.9	809.9	810.8	810.7	809.7	808.6	807.5	806.5
160°	817.1	817.9	818.7	818.6	817.7	816.7	815.8	814.9
162.5°	824.7	825.6	826.6	826.5	825.3	824.1	822.9	821.7
165°	834.0	835.0	835.9	835.9	835.0	834.0	833.0	832.1
167.5°	841.8	842.7	843.7	843.5	842.3	841.1	839.8	838.6
170°	845.7	846.6	847.7	847.5	846.3	845.0	843.8	842.6
172.5°	848.7	849.6	850.6	850.4	849.2	848.0	846.7	845.5
175°	851.9	852.8	853.8	853.6	852.2	850.8	849.5	848.1
177.5°	852.2	853.0	853.8	853.7	852.6	851.7	850.7	849.7
180°	851.2	851.2	851.2	851.2	851.2	851.2	851.2	851.2

(END OF REPORT)