

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: P331351-940

Luminaire Tested: **SA2XXDIP-C675D725U940-4F0-1E-UDD-D**

Issue Date: 10/7/2019

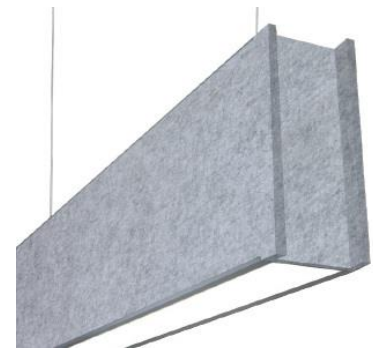
Test Information

Test Method: LM-79-08
Report Number: P331351-940
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-C675D725U940-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 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: 4981.8 lumens
Efficiency: N/A
Efficacy: 108.5 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: General Diffuse

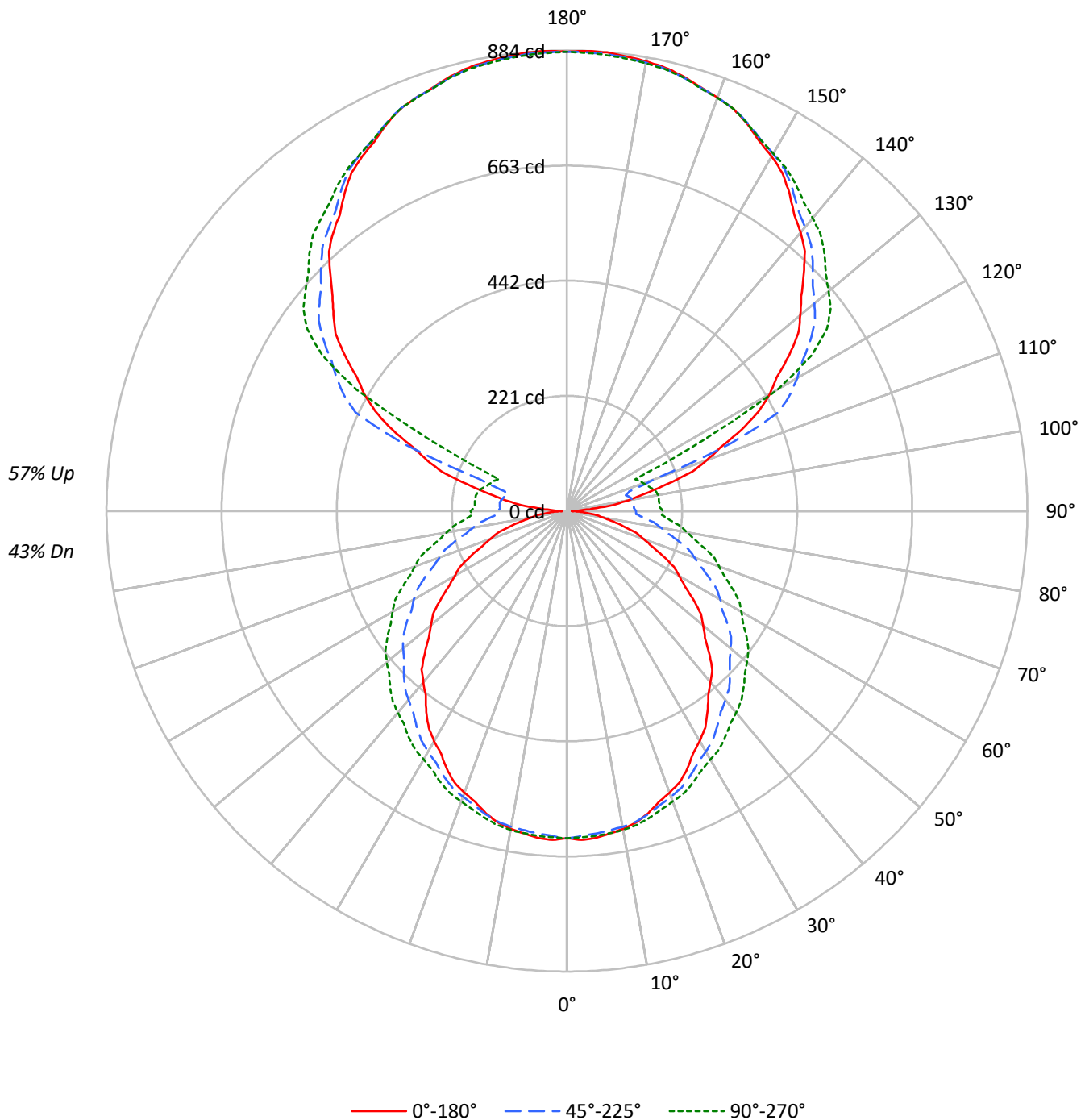
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331351-940

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Luminous Intensity Polar Plot





TEST NUMBER: P331351-940

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20						20
RC	80					70					50					30						10
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	
RCR																						
0	105	105	105	105		96	96	96	96		79	79	79		64	64	64		49	49	49	
1	95	90	86	82		86	82	78	75		68	65	62		54	52	50		42	40	39	
2	86	78	71	66		78	71	65	61		58	54	51		47	44	41		36	34	32	
3	78	68	60	54		71	62	55	50		51	46	42		41	37	34		31	29	27	
4	71	60	52	45		64	55	48	42		45	40	35		36	32	29		28	25	23	
5	65	53	45	39		59	49	41	36		40	35	30		32	28	25		25	22	19	
6	60	47	39	33		54	44	36	31		36	30	26		29	25	22		22	19	17	
7	55	43	35	29		50	39	32	27		33	27	23		26	22	19		20	17	15	
8	51	39	31	25		46	36	28	24		30	24	20		24	20	17		19	16	13	
9	48	35	28	22		43	32	26	21		27	22	18		22	18	15		17	14	12	
10	44	32	25	20		40	30	23	19		25	20	16		20	16	13		16	13	11	

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

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	1.2
10°-20°	170.7	3.4
20°-30°	258.6	5.2
30°-40°	315.0	6.3
40°-50°	338.9	6.8
50°-60°	329.1	6.6
60°-70°	287.4	5.8
70°-80°	221.2	4.4
80°-90°	150.6	3.0
90°-100°	131.7	2.6
100°-110°	182.5	3.7
110°-120°	337.6	6.8
120°-130°	503.4	10.1
130°-140°	517.6	10.4
140°-150°	472.3	9.5
150°-160°	378.1	7.6
160°-170°	243.7	4.9
170°-180°	83.9	1.7
0°-30°	488.8	9.8
0°-40°	803.8	16.1
0°-60°	1471.8	29.5
0°-90°	2131.1	42.8
90°-120°	651.8	13.1
90°-150°	2145.1	43.1
90°-180°	2851.0	57.2
0°-180°	4981.8	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	70	133	171	185	8
95°	49	72	130	166	178	56
105°	198	234	117	155	169	212
115°	370	393	448	193	144	364
125°	520	530	570	598	609	464
135°	643	653	668	692	699	496
145°	744	744	755	764	766	466
155°	820	815	822	825	820	378
165°	864	860	862	866	862	244
175°	883	879	880	884	878	84
180°	882	882	882	882	882	

TEST NUMBER: P331351-940

CATALOG NUMBER: SA2XXDIP-C675D725U940-4F0-1E-UDD-D

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	30.3	42.7	55.1	67.4	80.3	93.4	106.6	119.8	132.9	141.3
90°	9.7	23.0	36.3	49.6	62.9	76.6	90.7	104.8	118.9	133.0	141.7
92.5°	21.2	32.0	42.8	53.6	64.4	76.3	89.3	102.4	115.4	128.4	136.7
95°	48.8	53.6	58.4	63.2	68.0	77.0	90.2	103.3	116.5	129.6	137.9
97.5°	88.6	83.9	79.2	74.5	69.7	74.4	88.3	102.3	116.2	130.2	138.2
100°	119.3	107.4	95.4	83.5	71.5	72.4	86.1	99.9	113.7	127.4	136.0
102.5°	152.2	155.0	157.7	160.4	163.1	159.9	150.8	141.6	132.5	123.3	132.2
105°	198.5	208.6	218.7	228.8	239.0	229.9	201.7	173.5	145.3	117.2	125.8
107.5°	252.3	260.4	268.5	276.6	284.7	270.6	234.3	198.0	161.7	125.3	130.5
110°	286.2	293.3	300.2	307.3	314.3	302.3	271.3	240.2	209.1	178.1	170.4

TEST NUMBER: P331351-940

CATALOG NUMBER: SA2XXDIP-C675D725U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	318.9	324.9	330.9	337.0	343.0	345.7	345.0	344.3	343.6	343.0	297.7
115°	370.4	375.1	379.7	384.3	389.0	397.6	410.3	422.8	435.5	448.2	388.6
117.5°	415.5	419.7	423.8	428.0	432.1	439.7	450.5	461.4	472.3	483.0	473.2
120°	449.2	452.2	455.1	458.1	461.0	467.8	478.4	489.0	499.7	510.3	517.7
122.5°	477.8	480.4	483.0	485.5	488.0	494.5	504.9	515.3	525.7	536.1	542.6
125°	520.4	522.3	524.1	525.9	527.8	533.2	542.4	551.6	560.8	570.0	576.4
127.5°	559.8	561.7	563.5	565.3	567.2	571.8	579.0	586.2	593.4	600.7	607.1
130°	584.9	586.9	589.0	591.0	593.1	597.0	602.9	608.7	614.5	620.3	626.7
132.5°	610.4	612.1	613.8	615.5	617.2	620.5	625.4	630.2	635.1	639.9	645.9
135°	642.6	644.9	647.1	649.4	651.7	654.4	657.7	661.0	664.3	667.6	673.3
137.5°	676.2	677.7	679.2	680.8	682.3	684.3	686.6	688.9	691.3	693.7	698.7
140°	698.1	699.0	700.0	700.9	701.9	703.3	705.3	707.2	709.2	711.1	715.7
142.5°	716.5	717.3	718.1	718.9	719.8	721.1	723.0	724.8	726.7	728.5	732.3
145°	744.4	744.2	744.1	744.0	743.9	744.9	747.3	749.8	752.2	754.6	756.8
147.5°	769.5	769.0	768.5	767.9	767.4	768.3	770.7	773.0	775.4	777.8	778.7
150°	785.9	784.9	783.9	782.9	781.9	782.6	784.8	787.0	789.3	791.6	792.5
152.5°	799.6	798.5	797.5	796.3	795.2	795.8	797.9	800.0	802.2	804.3	805.2
155°	819.7	818.4	817.1	815.8	814.6	814.8	816.5	818.1	819.8	821.5	822.4
157.5°	835.4	834.3	833.2	832.1	831.1	831.1	832.3	833.5	834.6	835.9	836.9
160°	844.5	843.6	842.8	842.0	841.2	841.2	842.0	842.8	843.6	844.5	845.4
162.5°	852.7	851.9	851.0	850.2	849.3	849.3	850.0	850.7	851.5	852.2	853.2
165°	863.7	862.8	862.0	861.1	860.2	860.1	860.5	860.9	861.3	861.7	862.7
167.5°	871.8	871.0	870.1	869.3	868.4	868.2	868.6	869.0	869.4	869.8	870.8
170°	876.5	875.6	874.8	873.9	873.1	872.7	873.1	873.3	873.6	873.9	874.9
172.5°	879.5	878.6	877.8	876.9	876.1	875.8	876.1	876.4	876.6	876.9	878.0
175°	883.4	882.4	881.5	880.5	879.5	879.1	879.4	879.7	879.9	880.3	881.3
177.5°	884.1	883.3	882.5	881.7	880.9	880.6	880.7	880.8	880.9	881.0	881.8
180°	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5

TEST NUMBER: P331351-940

CATALOG NUMBER: SA2XXDIP-C675D725U940-4F0-1E-UDD-D

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°	149.7	158.1	166.5	172.0	174.7	177.3	179.9	182.6
90°	150.5	159.3	168.1	173.9	176.6	179.3	182.0	184.8
92.5°	145.0	153.3	161.6	167.0	169.6	172.3	174.9	177.5
95°	146.3	154.7	163.2	168.4	170.8	173.1	175.3	177.6
97.5°	146.2	154.3	162.4	167.6	170.2	172.8	175.3	177.9
100°	144.6	153.3	161.8	167.5	170.0	172.5	175.0	177.5
102.5°	140.9	149.7	158.5	164.3	166.8	169.4	172.1	174.7
105°	134.5	143.1	151.8	157.5	160.2	163.1	165.9	168.6
107.5°	135.7	140.9	146.2	150.2	152.9	155.7	158.5	161.3
110°	162.6	155.0	147.3	144.8	147.6	150.4	153.2	156.0

TEST NUMBER: P331351-940

CATALOG NUMBER: SA2XXDIP-C675D725U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	252.4	207.2	161.9	140.7	143.4	146.1	148.7	151.4
115°	329.0	269.5	209.9	176.2	168.2	160.2	152.2	144.3
117.5°	463.3	453.4	443.5	422.8	391.4	359.9	328.4	296.9
120°	525.0	532.4	539.8	535.0	518.1	501.2	484.3	467.3
122.5°	549.1	555.6	562.1	564.5	562.8	560.9	559.1	557.3
125°	582.8	589.3	595.8	600.1	602.4	604.6	606.9	609.1
127.5°	613.6	620.0	626.5	630.7	632.5	634.4	636.2	638.1
130°	633.1	639.5	646.0	649.9	651.3	652.8	654.3	655.8
132.5°	651.9	658.0	664.0	667.7	669.2	670.7	672.2	673.6
135°	678.9	684.7	690.4	693.8	695.2	696.5	697.9	699.2
137.5°	703.8	709.0	714.1	717.1	718.0	718.9	719.8	720.7
140°	720.1	724.7	729.2	731.6	732.2	732.7	733.2	733.7
142.5°	736.0	739.9	743.6	745.6	745.9	746.3	746.6	747.0
145°	759.0	761.3	763.4	764.6	765.0	765.3	765.6	765.9
147.5°	779.6	780.5	781.4	781.9	781.7	781.6	781.5	781.4
150°	793.3	794.2	795.0	795.0	794.3	793.6	792.9	792.2
152.5°	806.0	806.9	807.8	807.7	806.8	805.8	804.9	804.0
155°	823.3	824.1	825.0	824.8	823.7	822.6	821.4	820.3
157.5°	837.8	838.7	839.7	839.6	838.6	837.4	836.3	835.3
160°	846.2	847.1	847.9	847.8	846.9	845.9	844.9	843.9
162.5°	854.1	855.1	856.0	856.0	854.7	853.5	852.3	851.0
165°	863.7	864.8	865.8	865.8	864.8	863.7	862.7	861.7
167.5°	871.8	872.8	873.8	873.6	872.4	871.1	869.8	868.5
170°	875.8	876.8	877.9	877.7	876.5	875.1	873.9	872.6
172.5°	879.0	879.9	880.9	880.7	879.5	878.2	876.9	875.7
175°	882.3	883.2	884.2	884.0	882.6	881.2	879.8	878.3
177.5°	882.6	883.4	884.2	884.1	883.1	882.1	881.0	880.0
180°	881.5	881.5	881.5	881.5	881.5	881.5	881.5	881.5

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