

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: P331345-927

Luminaire Tested: **SA2XXDIP-C675D530U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331345-927
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-C675D530U927-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3815.5 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

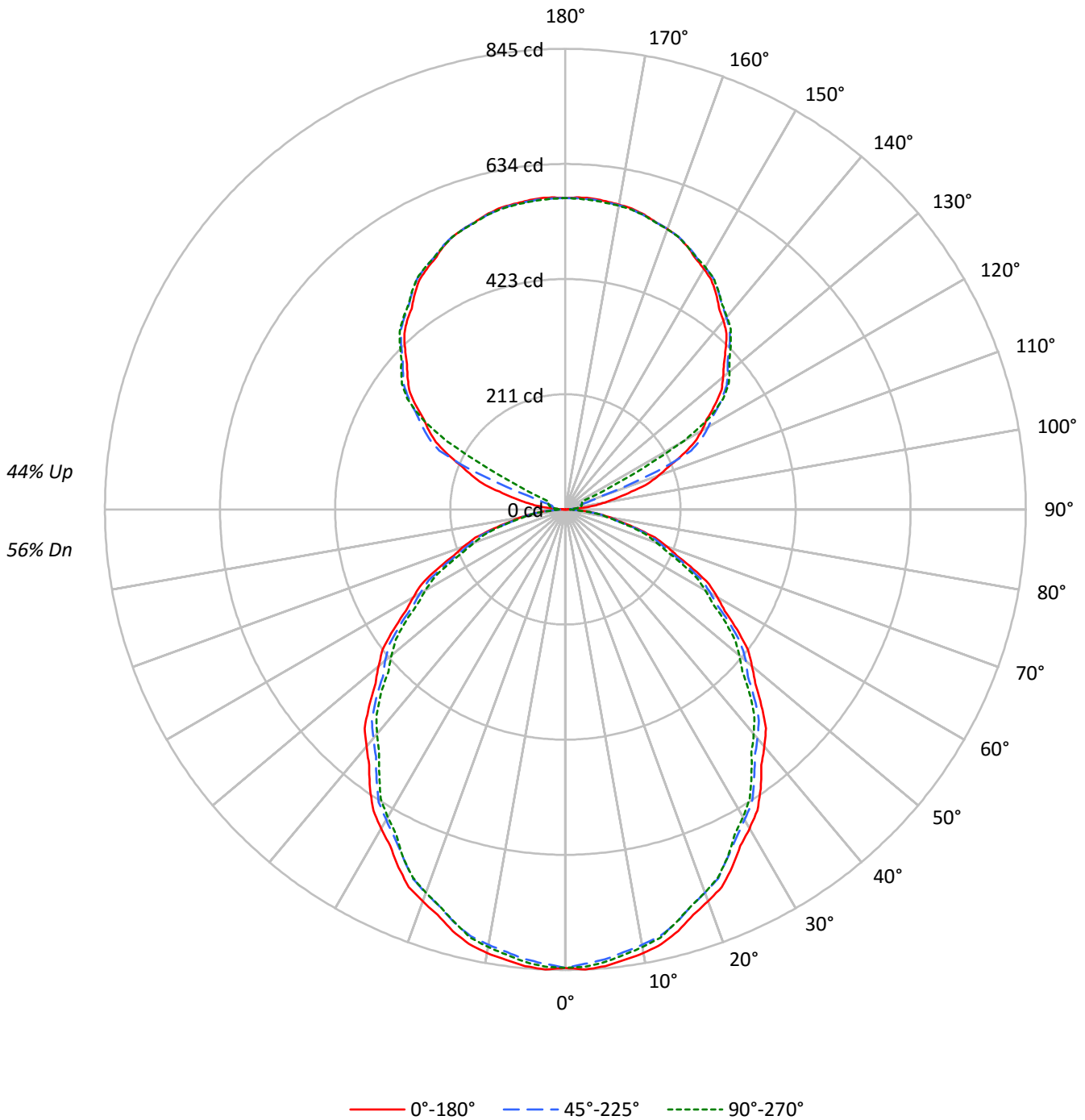
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331345-927

CATALOG NUMBER: SA2XXDIP-C675D530U927-4F0-1E-UDD-F

Luminous Intensity Polar Plot





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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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56				
1	99	95	91	87	92	88	85	82	76	74	71	65	63	61	55	53	52	47				
2	90	83	77	71	84	77	72	67	67	63	59	57	54	51	48	46	44	40				
3	82	73	65	59	76	68	61	56	59	54	50	50	47	43	43	40	37	34				
4	75	64	56	50	70	60	53	48	52	47	42	45	41	37	38	35	32	29				
5	69	57	49	43	64	54	46	41	47	41	37	40	36	32	34	31	28	25				
6	64	52	43	38	59	48	41	36	42	36	32	37	32	28	31	28	25	22				
7	59	47	39	33	55	44	36	31	38	32	28	33	29	25	28	25	22	19				
8	55	42	35	29	51	40	33	28	35	29	25	30	26	22	26	22	20	17				
9	51	39	31	26	47	36	30	25	32	26	22	28	23	20	24	21	18	16				
10	48	36	28	23	44	34	27	22	30	24	20	26	21	18	22	19	16	14				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13580	13580	13580
5°	13632	13434	13514
10°	13550	13298	13365
15°	13382	13125	13112
20°	13144	12866	12854
25°	12909	12549	12549
30°	12603	12258	12152
35°	12321	11907	11732
40°	11965	11556	11335
45°	11615	11209	10930
50°	11233	10846	10462
55°	10835	10427	10038
60°	10395	9923	9558
65°	9918	9425	8993
70°	9314	8818	8398
75°	8478	8122	7923
80°	7522	7290	6918
85°	6150	5835	5243



TEST NUMBER: P331345-927

CATALOG NUMBER: SA2XXDIP-C675D530U927-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.1	2.1
10°-20°	222.5	5.8
20°-30°	327.1	8.6
30°-40°	379.9	10.0
40°-50°	379.5	9.9
50°-60°	331.0	8.7
60°-70°	244.7	6.4
70°-80°	138.6	3.6
80°-90°	38.7	1.0
90°-100°	19.1	0.5
100°-110°	69.9	1.8
110°-120°	186.8	4.9
120°-130°	308.4	8.1
130°-140°	328.0	8.6
140°-150°	304.8	8.0
150°-160°	245.1	6.4
160°-170°	157.9	4.1
170°-180°	54.4	1.4
0°-30°	628.7	16.5
0°-40°	1008.6	26.4
0°-60°	1719.1	45.1
0°-90°	2141.2	56.1
90°-120°	275.8	7.2
90°-150°	1217.0	31.9
90°-180°	1674.0	43.9
0°-180°	3815.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	841	841	841	841	841	
5°	841	838	829	835	834	80
15°	801	795	785	788	784	225
25°	725	718	704	706	704	333
35°	625	617	604	599	595	390
45°	509	503	491	482	479	392
55°	385	380	370	361	357	344
65°	260	254	247	240	235	257
75°	136	134	130	126	127	145
85°	33	32	32	29	28	38
90°	0	5	8	10	11	3
95°	27	14	16	18	18	33
105°	126	131	25	30	31	134
115°	238	245	255	73	34	234
125°	336	342	349	352	354	300
135°	416	422	426	430	430	321
145°	482	482	489	492	490	302
155°	531	528	532	535	532	245
165°	560	558	558	561	558	158
175°	573	570	570	573	569	54
180°	571	571	571	571	571	



TEST NUMBER: P331345-927

CATALOG NUMBER: SA2XXDIP-C675D530U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1
2.5°	844.9	844.2	843.5	842.8	842.1	840.9	839.3	837.7	836.1	834.6	836.0
5°	841.1	840.3	839.6	838.9	838.2	836.9	834.9	832.9	830.9	828.9	830.4
7.5°	833.6	832.5	831.4	830.3	829.2	827.6	825.6	823.6	821.6	819.5	820.9
10°	826.5	825.2	823.9	822.7	821.5	819.8	817.6	815.5	813.3	811.1	812.5
12.5°	816.8	815.7	814.5	813.4	812.3	810.7	808.5	806.4	804.2	802.1	803.1
15°	800.6	799.5	798.4	797.4	796.3	794.6	792.3	789.9	787.6	785.2	786.0
17.5°	779.9	778.8	777.8	776.7	775.6	773.9	771.5	769.1	766.8	764.4	765.2
20°	765.0	764.0	762.9	761.8	760.7	758.9	756.4	753.9	751.4	748.8	749.4
22.5°	750.1	748.6	747.1	745.6	744.1	742.2	739.8	737.4	735.1	732.7	732.8
25°	724.6	723.2	721.8	720.3	718.8	716.6	713.5	710.5	707.4	704.4	704.7
27.5°	695.5	694.2	692.9	691.6	690.3	688.5	686.0	683.7	681.2	678.8	678.3
30°	676.0	674.6	673.2	671.8	670.3	668.3	665.6	662.9	660.2	657.5	657.0
32.5°	655.4	654.2	653.1	651.9	650.8	648.8	645.9	643.1	640.2	637.4	636.4
35°	625.1	623.4	621.5	619.7	617.9	615.6	612.8	609.8	607.0	604.1	603.0
37.5°	591.0	589.4	587.8	586.2	584.7	582.4	579.6	576.7	573.9	570.9	569.6
40°	567.7	566.3	564.8	563.4	562.0	559.8	556.9	554.1	551.2	548.3	546.7
42.5°	545.1	543.6	542.2	540.7	539.3	537.2	534.2	531.4	528.5	525.7	523.9
45°	508.7	507.4	506.1	504.9	503.7	501.7	499.0	496.3	493.6	490.9	488.9
47.5°	472.5	471.3	470.1	468.9	467.7	465.7	462.9	460.1	457.3	454.5	452.4
50°	447.2	446.3	445.4	444.5	443.6	441.9	439.4	436.9	434.4	431.8	429.4
52.5°	422.6	421.4	420.3	419.1	417.9	416.1	413.8	411.4	409.0	406.6	404.6
55°	384.9	383.9	382.8	381.7	380.6	379.0	376.8	374.7	372.6	370.4	368.2
57.5°	347.1	346.3	345.4	344.5	343.6	342.1	339.7	337.3	334.9	332.6	330.4
60°	321.9	321.2	320.4	319.7	319.0	317.3	314.9	312.4	309.8	307.3	305.3
62.5°	297.3	296.1	295.0	293.8	292.7	291.1	289.2	287.2	285.3	283.4	281.5
65°	259.6	258.5	257.5	256.4	255.2	253.8	252.1	250.3	248.4	246.7	245.0
67.5°	221.3	220.4	219.5	218.6	217.8	216.6	214.9	213.3	211.8	210.1	208.8
70°	197.3	196.6	195.9	195.2	194.5	193.3	191.6	190.0	188.5	186.8	185.5
72.5°	172.8	172.0	171.3	170.6	169.8	169.0	167.9	166.9	165.9	164.8	163.6
75°	135.9	135.5	135.1	134.8	134.4	133.8	132.9	132.0	131.1	130.2	129.1
77.5°	102.9	102.3	101.6	101.0	100.4	100.0	99.6	99.2	98.9	98.5	98.0
80°	80.9	80.7	80.5	80.3	80.2	79.9	79.5	79.1	78.8	78.4	77.9
82.5°	60.2	60.1	60.1	60.0	60.0	59.9	59.7	59.5	59.3	59.0	58.4
85°	33.2	33.0	32.8	32.6	32.4	32.2	32.1	31.9	31.7	31.5	31.0
87.5°	11.7	11.6	11.6	11.5	11.4	11.2	11.2	11.0	10.9	10.7	10.4
90°	0.4	1.4	2.5	3.4	4.4	5.3	6.1	6.8	7.5	8.2	8.7
92.5°	8.3	8.2	8.2	8.1	8.0	8.2	8.5	8.9	9.2	9.6	9.8
95°	26.9	23.8	20.8	17.7	14.7	13.5	14.2	14.8	15.4	16.2	16.6
97.5°	53.3	44.8	36.3	27.7	19.2	15.6	17.1	18.6	20.1	21.5	21.9
100°	73.2	60.6	48.0	35.4	22.8	17.3	18.9	20.4	22.0	23.5	24.3
102.5°	95.0	92.4	89.7	87.0	84.4	76.4	63.5	50.4	37.3	24.2	25.2
105°	125.6	128.4	131.2	134.0	136.7	125.6	100.4	75.4	50.3	25.2	26.2
107.5°	160.7	162.9	165.1	167.3	169.5	155.6	125.6	95.5	65.4	35.3	34.3
110°	183.2	185.1	187.0	188.9	190.8	178.6	152.0	125.5	98.9	72.3	63.1



TEST NUMBER: P331345-927

CATALOG NUMBER: SA2XXDIP-C675D530U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	204.3	206.0	207.7	209.5	211.1	208.7	202.2	195.6	189.0	182.5	148.9
115°	237.7	239.2	240.8	242.4	244.0	245.9	248.2	250.5	252.8	255.1	212.5
117.5°	267.6	269.3	271.1	272.8	274.6	276.2	277.8	279.4	281.0	282.5	272.3
120°	289.4	290.7	292.2	293.5	294.9	296.4	298.1	299.8	301.3	303.0	304.1
122.5°	307.9	309.3	310.9	312.3	313.7	315.4	317.1	318.9	320.8	322.6	323.2
125°	336.1	337.3	338.5	339.7	340.9	342.4	344.1	345.9	347.6	349.4	350.0
127.5°	361.6	363.0	364.3	365.6	366.9	368.3	369.6	370.9	372.2	373.5	374.4
130°	377.9	379.3	380.8	382.3	383.7	385.0	386.0	387.0	388.0	389.0	390.1
132.5°	394.4	395.6	396.9	398.2	399.4	400.5	401.6	402.6	403.5	404.6	405.4
135°	415.9	417.4	418.8	420.3	421.8	422.9	423.7	424.6	425.4	426.2	427.1
137.5°	437.7	438.6	439.7	440.7	441.7	442.8	443.7	444.7	445.5	446.5	447.4
140°	451.9	452.6	453.4	454.1	454.8	455.7	456.7	457.7	458.7	459.7	460.6
142.5°	463.7	464.5	465.1	465.7	466.4	467.3	468.5	469.6	470.8	472.0	472.7
145°	482.4	482.4	482.3	482.2	482.1	482.8	484.4	485.9	487.5	489.1	489.7
147.5°	498.8	498.4	498.0	497.7	497.3	498.0	499.5	501.1	502.6	504.1	504.6
150°	509.3	508.7	508.0	507.4	506.8	507.2	508.7	510.1	511.6	513.0	513.6
152.5°	518.2	517.5	516.8	516.1	515.4	515.7	517.1	518.6	519.9	521.3	521.9
155°	531.2	530.4	529.6	528.8	527.9	528.1	529.2	530.3	531.4	532.5	533.1
157.5°	541.4	540.7	540.0	539.3	538.6	538.7	539.4	540.2	541.0	541.8	542.3
160°	547.4	546.8	546.3	545.7	545.2	545.2	545.7	546.3	546.8	547.4	548.0
162.5°	552.6	552.1	551.5	551.0	550.5	550.4	550.9	551.4	551.8	552.3	552.9
165°	559.8	559.2	558.6	558.1	557.5	557.5	557.7	557.9	558.3	558.5	559.2
167.5°	565.1	564.5	564.0	563.4	562.8	562.7	562.9	563.2	563.5	563.7	564.4
170°	568.0	567.5	567.0	566.4	565.9	565.6	565.9	566.0	566.2	566.4	567.0
172.5°	570.1	569.5	568.9	568.4	567.8	567.6	567.8	568.0	568.2	568.4	569.0
175°	572.6	572.0	571.3	570.7	570.0	569.8	570.0	570.1	570.3	570.5	571.2
177.5°	573.0	572.5	572.0	571.5	570.9	570.7	570.8	570.8	570.9	571.0	571.6
180°	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3



TEST NUMBER: P331345-927

CATALOG NUMBER: SA2XXDIP-C675D530U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1
2.5°	837.4	838.9	840.3	840.9	840.6	840.3	840.0	839.8
5°	831.8	833.2	834.6	835.2	834.9	834.5	834.2	833.8
7.5°	822.4	823.9	825.3	825.8	825.4	825.1	824.7	824.3
10°	814.0	815.5	816.9	817.3	816.8	816.3	815.7	815.2
12.5°	804.1	805.1	806.1	806.4	806.0	805.6	805.3	804.9
15°	786.7	787.4	788.1	788.1	787.1	786.2	785.4	784.4
17.5°	766.0	766.8	767.7	767.7	766.8	766.0	765.1	764.2
20°	750.0	750.5	751.0	750.9	750.2	749.5	748.8	748.1
22.5°	732.9	733.0	733.1	732.9	732.5	732.1	731.7	731.3
25°	705.1	705.4	705.8	705.8	705.4	705.1	704.7	704.4
27.5°	677.7	677.2	676.7	676.0	675.1	674.2	673.4	672.5
30°	656.4	655.8	655.3	654.7	653.9	653.2	652.5	651.8
32.5°	635.5	634.5	633.5	632.7	632.0	631.3	630.5	629.8
35°	602.0	600.9	599.8	598.8	597.9	597.0	596.1	595.2
37.5°	568.3	567.0	565.6	564.5	563.6	562.8	562.0	561.1
40°	545.1	543.4	541.9	540.7	540.0	539.2	538.5	537.8
42.5°	522.1	520.4	518.6	517.2	516.2	515.2	514.2	513.2
45°	487.0	485.0	483.0	481.6	480.9	480.2	479.5	478.7
47.5°	450.4	448.2	446.2	444.6	443.5	442.5	441.5	440.5
50°	426.8	424.3	421.8	420.1	419.1	418.3	417.4	416.5
52.5°	402.4	400.4	398.3	396.6	395.5	394.3	393.1	391.9
55°	366.1	363.9	361.8	360.2	359.3	358.5	357.5	356.6
57.5°	328.3	326.1	324.1	322.7	321.9	321.3	320.6	319.9
60°	303.3	301.3	299.4	298.2	297.6	297.1	296.5	296.0
62.5°	279.7	277.9	276.1	274.8	274.1	273.4	272.7	272.0
65°	243.4	241.8	240.2	238.9	238.1	237.1	236.2	235.4
67.5°	207.6	206.4	205.1	204.1	203.4	202.6	201.9	201.2
70°	184.3	183.1	181.8	180.8	180.1	179.4	178.6	177.9
72.5°	162.3	161.1	159.8	158.8	158.3	157.7	157.2	156.5
75°	128.0	127.0	125.9	125.6	125.9	126.3	126.6	127.0
77.5°	97.4	96.9	96.3	95.9	95.3	94.8	94.3	93.8
80°	77.4	76.8	76.3	75.8	75.5	75.1	74.8	74.4
82.5°	57.7	57.0	56.3	55.9	55.8	55.8	55.7	55.6
85°	30.5	29.9	29.4	29.0	28.8	28.7	28.5	28.3
87.5°	10.1	9.7	9.3	9.1	9.0	9.0	8.8	8.7
90°	9.2	9.7	10.1	10.5	10.6	10.8	11.0	11.2
92.5°	10.1	10.3	10.5	10.7	10.9	10.9	11.1	11.2
95°	17.0	17.5	18.0	18.1	18.1	18.0	17.9	17.7
97.5°	22.3	22.7	23.1	23.3	23.4	23.5	23.6	23.8
100°	25.0	25.7	26.5	26.9	27.2	27.3	27.5	27.7
102.5°	26.1	27.1	28.0	28.7	28.9	29.2	29.4	29.7
105°	27.3	28.3	29.2	29.9	30.3	30.7	31.1	31.4
107.5°	33.3	32.2	31.2	30.9	31.2	31.6	31.9	32.3
110°	53.9	44.8	35.6	31.2	31.5	31.9	32.3	32.6



TEST NUMBER: P331345-927

CATALOG NUMBER: SA2XXDIP-C675D530U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	115.4	81.9	48.4	31.8	32.1	32.4	32.7	33.0
115°	170.0	127.5	84.9	60.4	53.7	47.1	40.5	33.9
117.5°	262.0	251.7	241.4	225.4	203.6	181.9	160.2	138.4
120°	305.2	306.3	307.4	301.8	289.4	277.0	264.6	252.2
122.5°	323.8	324.6	325.2	324.3	321.9	319.5	317.1	314.7
125°	350.6	351.3	351.9	352.4	352.7	352.9	353.2	353.5
127.5°	375.3	376.3	377.2	377.7	377.8	377.9	377.9	378.0
130°	391.0	392.1	393.1	393.6	393.4	393.3	393.2	393.2
132.5°	406.3	407.2	408.1	408.4	408.3	408.2	408.1	408.1
135°	428.1	429.0	429.9	430.3	430.1	429.9	429.8	429.5
137.5°	448.3	449.2	450.1	450.4	450.0	449.7	449.5	449.2
140°	461.4	462.2	463.0	463.2	462.7	462.3	461.8	461.4
142.5°	473.5	474.2	475.0	475.2	474.7	474.2	473.7	473.2
145°	490.4	491.0	491.6	491.7	491.3	490.8	490.4	489.9
147.5°	505.1	505.6	506.0	506.0	505.7	505.3	504.9	504.5
150°	514.1	514.7	515.2	515.3	514.8	514.4	513.9	513.5
152.5°	522.4	523.0	523.6	523.5	522.9	522.3	521.7	521.1
155°	533.6	534.2	534.7	534.6	533.9	533.1	532.4	531.6
157.5°	543.0	543.6	544.2	544.2	543.4	542.7	542.0	541.3
160°	548.4	549.0	549.5	549.5	548.9	548.3	547.6	546.9
162.5°	553.6	554.2	554.8	554.8	554.0	553.2	552.4	551.6
165°	559.8	560.5	561.1	561.1	560.5	559.8	559.2	558.5
167.5°	565.0	565.7	566.3	566.3	565.4	564.6	563.7	562.9
170°	567.7	568.3	568.9	568.9	568.0	567.2	566.4	565.5
172.5°	569.7	570.3	570.9	570.8	570.1	569.2	568.4	567.5
175°	571.8	572.4	573.1	573.0	572.0	571.1	570.2	569.3
177.5°	572.0	572.6	573.1	573.0	572.4	571.6	571.0	570.4
180°	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3

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