

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: P332596-927

Luminaire Tested: **SA4XXDIP-C795D590U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332596-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C795D590U927-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4321.1 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Direct

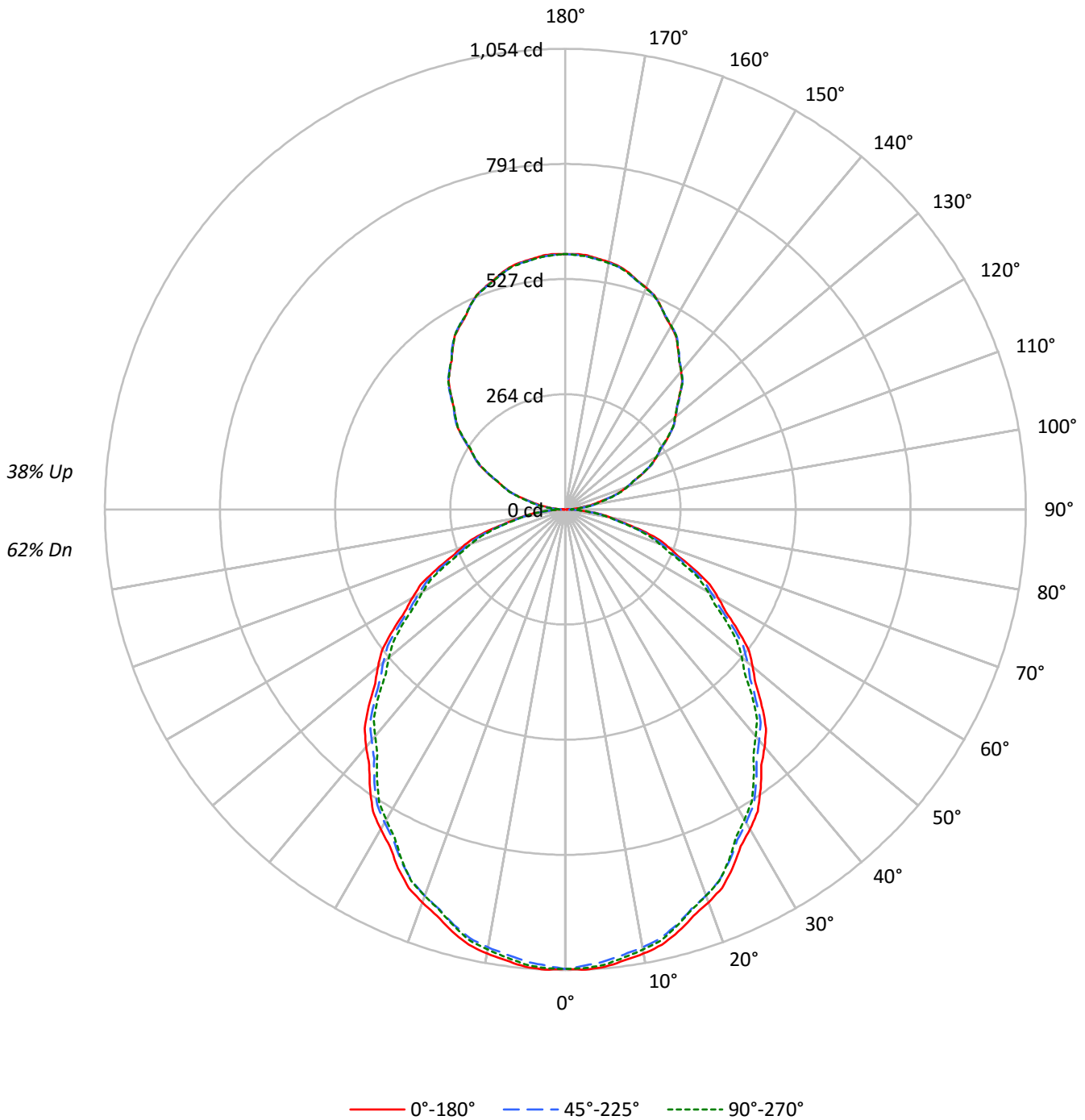
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	68	68	68	62																			
1	101	96	92	89	94	90	87	84	79	77	74	69	67	65	60	58	57	53																			
2	92	84	78	72	86	79	73	69	69	65	61	61	57	55	53	50	48	44																			
3	84	74	66	60	78	69	63	57	61	56	52	54	50	46	47	43	41	37																			
4	76	65	57	51	71	62	54	49	54	49	44	48	43	40	42	38	35	32																			
5	70	58	50	44	66	55	48	42	49	43	38	43	38	34	37	34	31	28																			
6	65	52	44	38	60	49	42	37	44	38	33	39	34	30	34	30	27	24																			
7	60	47	39	34	56	45	37	32	40	34	29	35	30	27	31	27	24	22																			
8	56	43	35	30	52	41	34	29	36	30	26	32	27	24	29	25	22	19																			
9	52	39	32	27	49	37	30	26	34	28	24	30	25	22	26	22	20	17																			
10	49	36	29	24	46	34	28	23	31	25	21	28	23	20	25	21	18	16																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8490	8490	8490
5°	8515	8413	8474
10°	8461	8344	8385
15°	8359	8226	8247
20°	8223	8079	8086
25°	8068	7911	7888
30°	7879	7713	7643
35°	7681	7508	7407
40°	7477	7273	7140
45°	7263	7042	6907
50°	7027	6836	6625
55°	6773	6570	6356
60°	6516	6273	6082
65°	6229	5989	5746
70°	5908	5611	5391
75°	5415	5153	5022
80°	4816	4621	4505
85°	4215	4057	3974



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.0	2.3
10°-20°	279.0	6.5
20°-30°	410.7	9.5
30°-40°	477.4	11.0
40°-50°	477.5	11.0
50°-60°	417.6	9.7
60°-70°	310.2	7.2
70°-80°	176.2	4.1
80°-90°	52.6	1.2
90°-100°	38.5	0.9
100°-110°	114.1	2.6
110°-120°	193.7	4.5
120°-130°	255.5	5.9
130°-140°	286.9	6.6
140°-150°	281.9	6.5
150°-160°	237.1	5.5
160°-170°	157.8	3.7
170°-180°	55.2	1.3
0°-30°	788.7	18.3
0°-40°	1266.2	29.3
0°-60°	2161.3	50.0
0°-90°	2700.3	62.5
90°-120°	346.4	8.0
90°-150°	1170.7	27.1
90°-180°	1621.0	37.5
0°-180°	4321.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1052	1052	1052	1052	1052	
5°	1051	1047	1038	1047	1046	100
15°	1000	996	984	989	987	282
25°	906	900	888	889	886	417
35°	779	773	762	756	752	487
45°	636	630	617	608	605	490
55°	481	478	467	457	452	431
65°	326	322	314	305	301	323
75°	174	169	165	162	161	184
85°	46	45	44	44	43	50
90°	1	6	10	13	14	4
95°	27	31	34	36	36	30
105°	105	106	108	109	110	112
115°	197	197	196	196	195	194
125°	287	287	286	286	285	256
135°	370	373	373	372	370	286
145°	450	451	452	451	450	281
155°	515	515	515	516	515	237
165°	561	559	558	561	559	158
175°	583	581	581	583	581	55
180°	584	584	584	584	584	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6
2.5°	1054.3	1053.8	1053.4	1053.0	1052.5	1051.5	1049.8	1048.1	1046.5	1044.9	1046.3
5°	1050.8	1050.0	1049.2	1048.5	1047.7	1046.3	1044.3	1042.2	1040.1	1038.1	1040.1
7.5°	1041.0	1040.2	1039.5	1038.7	1038.0	1036.5	1034.2	1031.9	1029.6	1027.3	1029.0
10°	1032.2	1031.5	1030.7	1030.0	1029.2	1027.6	1025.2	1022.8	1020.3	1017.9	1019.4
12.5°	1020.7	1020.0	1019.2	1018.5	1017.8	1016.1	1013.5	1010.9	1008.4	1005.8	1007.4
15°	1000.2	999.4	998.7	997.9	997.2	995.5	992.6	989.8	987.0	984.2	985.3
17.5°	975.4	974.5	973.5	972.6	971.7	969.9	967.3	964.6	961.9	959.3	960.0
20°	957.2	956.2	955.4	954.4	953.5	951.6	948.8	945.9	943.2	940.4	941.0
22.5°	937.7	936.4	935.2	934.0	932.7	930.7	927.9	925.1	922.3	919.5	920.5
25°	905.8	904.5	903.2	901.9	900.6	898.6	896.0	893.3	890.7	888.1	888.3
27.5°	869.4	868.1	866.7	865.4	864.0	862.1	859.7	857.3	854.8	852.4	851.9
30°	845.2	843.7	842.2	840.7	839.2	837.2	834.7	832.3	829.9	827.4	826.7
32.5°	819.5	818.2	816.8	815.5	814.1	812.1	809.6	807.0	804.5	801.8	801.0
35°	779.4	778.1	776.8	775.5	774.2	772.2	769.6	767.0	764.4	761.8	760.4
37.5°	737.1	735.9	734.7	733.6	732.3	730.3	727.5	724.7	721.9	719.1	717.6
40°	709.5	708.0	706.5	705.0	703.5	701.3	698.5	695.7	692.9	690.1	688.2
42.5°	679.9	678.9	678.0	677.2	676.2	674.2	671.1	668.0	664.9	661.8	659.7
45°	636.2	634.9	633.6	632.2	631.0	628.8	625.8	622.8	619.8	616.8	614.7
47.5°	590.5	589.6	588.7	587.8	586.9	585.1	582.3	579.6	576.8	574.0	571.6
50°	559.5	558.7	558.0	557.2	556.5	554.8	552.2	549.6	546.9	544.3	541.7
52.5°	529.2	528.3	527.4	526.5	525.5	523.7	520.9	518.2	515.4	512.6	510.3
55°	481.2	480.5	480.0	479.4	478.9	477.3	474.7	472.1	469.4	466.8	464.5
57.5°	435.3	434.7	434.0	433.4	432.8	431.1	428.6	426.0	423.4	420.8	418.7
60°	403.6	402.7	401.7	400.8	399.9	398.2	395.8	393.3	390.9	388.5	386.7
62.5°	372.6	371.9	371.1	370.3	369.5	367.8	365.2	362.6	360.0	357.4	355.9
65°	326.1	325.2	324.2	323.3	322.3	320.9	319.1	317.2	315.3	313.5	311.6
67.5°	279.2	278.4	277.5	276.6	275.8	274.5	272.7	270.8	269.1	267.3	265.5
70°	250.3	249.0	247.6	246.3	245.0	243.6	242.1	240.6	239.1	237.7	236.1
72.5°	219.3	217.9	216.7	215.3	214.0	212.8	211.6	210.3	209.1	207.9	206.8
75°	173.6	172.6	171.7	170.8	169.8	168.9	167.9	167.0	166.1	165.2	164.4
77.5°	129.9	129.5	129.1	128.7	128.3	127.7	126.8	126.0	125.2	124.4	124.1
80°	103.6	103.1	102.5	102.0	101.4	100.9	100.5	100.2	99.8	99.4	99.0
82.5°	78.0	77.8	77.5	77.2	77.0	76.8	76.8	76.7	76.6	76.5	76.3
85°	45.5	45.5	45.5	45.5	45.5	45.3	44.9	44.6	44.2	43.8	43.8
87.5°	17.8	17.9	17.9	18.0	18.1	18.1	18.1	18.1	18.1	18.1	18.3
90°	1.3	2.5	3.6	4.7	5.8	6.7	7.5	8.3	9.1	9.9	10.5
92.5°	9.7	10.9	12.2	13.5	14.7	15.6	16.2	16.8	17.3	17.9	18.2
95°	27.1	28.0	28.9	29.8	30.7	31.5	32.2	33.0	33.7	34.3	34.6
97.5°	47.4	48.1	48.8	49.5	50.2	51.0	51.8	52.7	53.5	54.3	54.7
100°	63.2	63.7	64.1	64.5	64.9	65.5	66.4	67.3	68.2	69.2	69.3
102.5°	79.9	80.0	80.2	80.3	80.5	81.0	81.8	82.6	83.5	84.3	84.6
105°	105.3	105.4	105.4	105.6	105.7	105.9	106.3	106.7	107.1	107.5	107.8
107.5°	131.9	132.1	132.1	132.3	132.5	132.5	132.5	132.6	132.7	132.8	133.0
110°	150.0	150.2	150.4	150.6	150.8	150.8	150.8	150.7	150.6	150.4	150.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	168.8	168.8	168.9	168.9	169.0	168.9	168.7	168.5	168.3	168.2	168.1
115°	197.0	197.0	197.0	197.0	197.0	196.9	196.7	196.5	196.3	196.1	196.0
117.5°	223.6	223.6	223.7	223.8	223.9	223.9	223.7	223.6	223.4	223.3	222.9
120°	241.3	241.7	242.1	242.5	242.9	243.0	242.6	242.3	242.0	241.7	241.2
122.5°	259.7	259.8	260.0	260.2	260.3	260.4	260.2	260.1	259.9	259.8	259.4
125°	286.9	286.9	286.9	286.9	286.9	286.8	286.8	286.7	286.5	286.5	286.2
127.5°	311.6	311.9	312.2	312.5	312.8	312.8	312.7	312.5	312.4	312.2	312.0
130°	328.9	329.2	329.5	329.9	330.1	330.3	330.3	330.3	330.3	330.3	330.1
132.5°	346.7	346.9	347.1	347.3	347.5	347.6	347.5	347.5	347.4	347.3	347.1
135°	370.0	370.7	371.2	371.9	372.5	372.7	372.7	372.7	372.7	372.7	372.6
137.5°	395.5	395.8	396.1	396.3	396.6	396.9	397.0	397.2	397.4	397.5	397.3
140°	412.5	412.7	412.9	413.1	413.3	413.4	413.4	413.4	413.4	413.4	413.3
142.5°	428.0	428.3	428.5	428.6	428.9	428.9	428.8	428.7	428.6	428.6	428.6
145°	449.6	450.0	450.4	450.8	451.1	451.4	451.5	451.6	451.7	451.8	451.7
147.5°	470.9	471.3	471.8	472.3	472.9	473.0	472.9	472.9	472.8	472.7	472.6
150°	483.9	484.3	484.7	485.1	485.5	485.7	485.7	485.7	485.7	485.7	485.7
152.5°	496.2	496.5	496.7	496.9	497.2	497.3	497.4	497.5	497.6	497.6	497.9
155°	515.1	515.1	515.1	515.1	515.1	515.0	514.9	514.8	514.8	514.6	515.0
157.5°	531.0	530.8	530.6	530.4	530.3	530.1	530.1	530.1	530.1	530.0	530.4
160°	540.3	540.3	540.2	540.1	540.0	539.9	539.8	539.7	539.6	539.5	539.8
162.5°	549.1	548.8	548.5	548.3	548.0	547.8	547.7	547.6	547.6	547.4	548.0
165°	560.7	560.4	560.1	559.8	559.5	559.3	559.0	558.9	558.6	558.5	559.0
167.5°	569.7	569.3	568.8	568.4	568.0	567.8	567.8	567.8	567.8	567.8	568.5
170°	574.7	574.3	573.7	573.2	572.7	572.5	572.6	572.7	572.8	572.9	573.5
172.5°	578.3	577.9	577.5	577.1	576.6	576.5	576.5	576.5	576.5	576.6	577.2
175°	583.3	582.8	582.3	581.8	581.3	581.0	580.9	580.8	580.7	580.6	581.3
177.5°	584.9	584.6	584.2	583.8	583.3	583.1	583.1	583.1	583.1	583.1	583.7
180°	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6
2.5°	1047.8	1049.3	1050.8	1051.5	1051.4	1051.2	1051.1	1050.9
5°	1042.2	1044.3	1046.3	1047.2	1046.8	1046.5	1046.1	1045.7
7.5°	1030.6	1032.3	1033.9	1034.6	1034.4	1034.2	1034.0	1033.7
10°	1020.9	1022.4	1023.9	1024.5	1024.1	1023.7	1023.3	1022.9
12.5°	1009.1	1010.7	1012.3	1012.9	1012.4	1011.9	1011.3	1010.8
15°	986.4	987.5	988.6	989.0	988.4	987.9	987.3	986.7
17.5°	960.7	961.4	962.1	962.3	961.9	961.5	961.2	960.8
20°	941.5	942.1	942.6	942.7	942.3	942.0	941.6	941.2
22.5°	921.5	922.5	923.5	923.7	923.0	922.3	921.6	921.0
25°	888.5	888.7	888.9	888.6	887.9	887.1	886.4	885.6
27.5°	851.5	851.0	850.6	849.9	849.0	848.0	847.1	846.1
30°	825.9	825.2	824.4	823.6	822.7	821.7	820.8	819.9
32.5°	800.0	799.2	798.3	797.3	796.4	795.4	794.5	793.6
35°	759.1	757.8	756.5	755.3	754.4	753.5	752.6	751.6
37.5°	716.2	714.8	713.4	712.1	710.8	709.6	708.4	707.1
40°	686.3	684.5	682.6	681.2	680.2	679.4	678.4	677.5
42.5°	657.4	655.3	653.1	651.7	651.1	650.5	649.8	649.2
45°	612.7	610.6	608.6	607.3	606.7	606.1	605.5	605.0
47.5°	569.3	567.0	564.7	562.8	561.4	560.0	558.6	557.1
50°	539.1	536.5	533.9	532.0	530.8	529.7	528.6	527.5
52.5°	508.0	505.6	503.4	501.5	500.1	498.7	497.3	495.8
55°	462.3	460.1	457.8	456.1	455.0	453.9	452.7	451.6
57.5°	416.5	414.4	412.3	410.7	409.6	408.4	407.4	406.3
60°	385.1	383.4	381.7	380.4	379.5	378.5	377.6	376.7
62.5°	354.3	352.8	351.3	350.1	349.1	348.2	347.3	346.3
65°	309.7	307.8	305.9	304.6	303.6	302.7	301.7	300.8
67.5°	263.7	261.9	260.1	259.0	258.8	258.6	258.3	258.0
70°	234.6	233.1	231.6	230.6	230.0	229.5	228.9	228.4
72.5°	205.6	204.4	203.2	202.3	201.7	201.1	200.6	200.0
75°	163.7	162.9	162.2	161.7	161.5	161.3	161.1	161.0
77.5°	123.9	123.7	123.5	123.1	122.6	122.2	121.7	121.2
80°	98.7	98.3	97.9	97.7	97.4	97.3	97.1	96.9
82.5°	76.0	75.8	75.6	75.4	75.3	75.0	74.9	74.6
85°	43.8	43.8	43.8	43.7	43.6	43.3	43.2	42.9
87.5°	18.4	18.5	18.6	18.7	18.8	18.8	18.9	18.9
90°	11.2	11.7	12.4	12.8	13.0	13.2	13.4	13.5
92.5°	18.6	19.0	19.3	19.6	19.7	19.8	20.0	20.0
95°	34.9	35.3	35.6	35.7	35.7	35.7	35.7	35.7
97.5°	55.1	55.4	55.8	55.9	55.9	55.9	55.9	55.9
100°	69.6	69.7	69.9	70.0	70.0	70.0	70.0	70.0
102.5°	84.8	85.2	85.4	85.6	85.7	85.8	85.9	86.0
105°	108.1	108.4	108.8	109.0	109.3	109.6	110.0	110.3
107.5°	133.3	133.6	133.9	134.0	134.0	134.0	134.0	134.0
110°	150.0	149.9	149.6	149.7	150.0	150.3	150.6	150.9



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CATALOG NUMBER: SA4XXDIP-C795D590U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	168.1	168.0	168.0	168.0	168.1	168.1	168.2	168.3
115°	195.9	195.8	195.7	195.6	195.5	195.4	195.3	195.2
117.5°	222.6	222.3	221.9	221.7	221.4	221.3	221.0	220.9
120°	240.7	240.2	239.7	239.6	239.8	240.0	240.2	240.3
122.5°	259.1	258.8	258.4	258.1	257.7	257.4	257.0	256.7
125°	286.1	285.8	285.7	285.4	285.3	285.0	284.9	284.6
127.5°	311.8	311.6	311.4	311.2	311.1	310.9	310.8	310.6
130°	329.9	329.7	329.5	329.2	328.8	328.4	328.0	327.6
132.5°	346.9	346.7	346.5	346.3	346.1	345.9	345.8	345.6
135°	372.3	372.2	371.9	371.7	371.4	371.1	370.8	370.5
137.5°	397.0	396.7	396.5	396.3	396.4	396.5	396.6	396.6
140°	413.2	413.1	413.0	412.9	412.8	412.7	412.6	412.5
142.5°	428.6	428.6	428.5	428.5	428.5	428.5	428.4	428.4
145°	451.6	451.5	451.4	451.2	450.9	450.6	450.3	450.0
147.5°	472.5	472.5	472.4	472.3	472.2	472.1	472.0	471.9
150°	485.7	485.7	485.7	485.7	485.5	485.4	485.4	485.3
152.5°	498.1	498.4	498.6	498.6	498.4	498.0	497.8	497.6
155°	515.4	515.8	516.3	516.3	515.8	515.4	515.0	514.6
157.5°	530.7	531.0	531.3	531.2	530.9	530.6	530.2	529.9
160°	540.1	540.3	540.7	540.6	540.1	539.6	539.1	538.6
162.5°	548.5	549.1	549.6	549.6	549.1	548.6	548.1	547.6
165°	559.7	560.2	560.9	560.9	560.5	560.2	559.8	559.4
167.5°	569.0	569.7	570.3	570.2	569.7	569.0	568.4	567.8
170°	574.1	574.7	575.3	575.3	574.6	573.9	573.1	572.4
172.5°	577.9	578.6	579.2	579.2	578.5	577.8	577.1	576.5
175°	582.0	582.7	583.4	583.4	582.7	582.0	581.3	580.6
177.5°	584.2	584.8	585.3	585.3	584.7	584.1	583.4	582.7
180°	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2

(END OF REPORT)