

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: P331369-930

Luminaire Tested: **SA2XXDIP-C675D1080U930-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331369-930
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-C675D1080U930-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

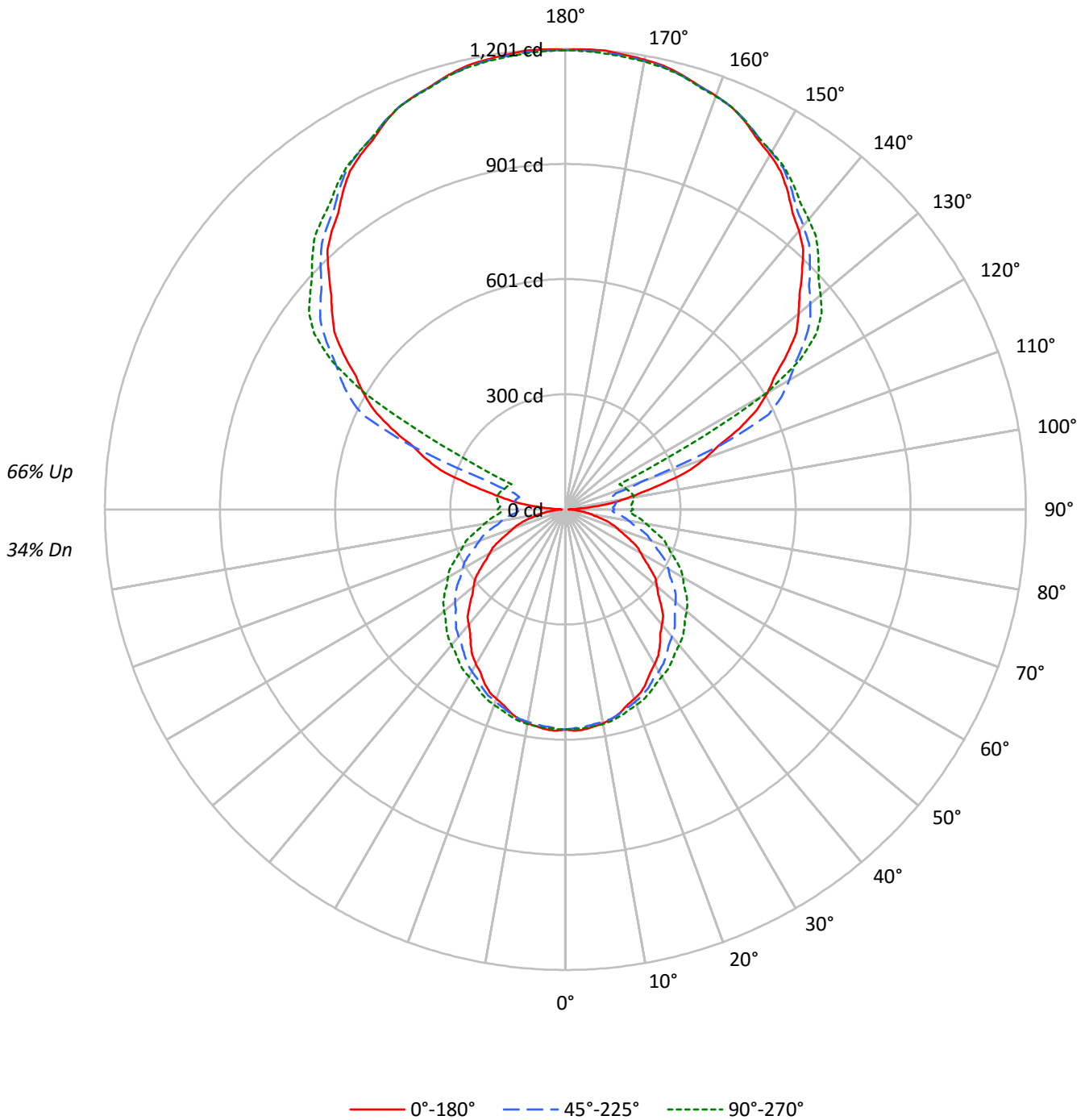
Lumens per Lamp: N/A
Luminaire Lumens: 5704.0 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 56.9
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



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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	103	103	103	103	93	93	93	93	75	75	75	57	57	57	42	42	42	34				
1	93	89	84	81	84	80	76	73	64	61	59	49	47	46	35	34	33	27				
2	84	77	70	65	76	69	64	59	55	51	48	42	40	37	30	29	27	22				
3	77	67	60	54	69	61	54	49	48	44	40	37	34	31	26	24	23	18				
4	70	59	51	45	63	53	46	41	43	38	34	33	29	26	23	21	19	15				
5	64	52	44	38	57	47	40	35	38	33	29	29	25	22	21	18	16	13				
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	19	16	14	11				
7	54	42	34	28	49	38	31	26	31	25	22	24	20	17	17	15	13	10				
8	50	38	30	25	45	34	28	23	28	23	19	22	18	15	16	13	11	9				
9	47	35	27	22	42	31	25	20	25	20	17	20	16	13	15	12	10	8				
10	43	32	24	20	39	29	22	18	23	18	15	18	15	12	13	11	9	7				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9273	9273	9273
5°	9317	8925	8891
10°	9259	8661	8564
15°	9131	8383	8221
20°	8970	8083	7889
25°	8811	7795	7587
30°	8587	7498	7284
35°	8359	7211	7072
40°	8120	6969	6858
45°	7894	6750	6677
50°	7650	6553	6497
55°	7394	6340	6314
60°	7081	6122	6123
65°	6755	5864	5892
70°	6394	5587	5644
75°	5927	5315	5415
80°	5197	5036	5185
85°	4489	4797	5004



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	1.0
10°-20°	156.0	2.7
20°-30°	236.5	4.1
30°-40°	288.0	5.0
40°-50°	309.9	5.4
50°-60°	300.9	5.3
60°-70°	262.7	4.6
70°-80°	202.3	3.5
80°-90°	138.7	2.4
90°-100°	133.5	2.3
100°-110°	214.8	3.8
110°-120°	436.8	7.7
120°-130°	671.7	11.8
130°-140°	698.1	12.2
140°-150°	640.9	11.2
150°-160°	513.8	9.0
160°-170°	331.1	5.8
170°-180°	114.0	2.0
0°-30°	446.9	7.8
0°-40°	734.9	12.9
0°-60°	1345.7	23.6
0°-90°	1949.4	34.2
90°-120°	785.0	13.8
90°-150°	2795.8	49.0
90°-180°	3755.0	65.8
0°-180°	5704.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	576	573	568	573	573	55
15°	549	551	551	558	558	155
25°	499	505	513	522	525	229
35°	430	445	460	478	484	269
45°	353	376	404	429	439	272
55°	270	301	344	373	384	242
65°	185	226	275	308	320	183
75°	102	149	202	237	249	108
85°	30	82	135	168	181	32
90°	9	67	127	163	176	8
95°	63	76	130	164	175	74
105°	268	304	124	162	176	286
115°	502	528	585	226	155	494
125°	706	719	761	788	799	630
135°	873	887	903	928	934	674
145°	1012	1011	1025	1036	1036	633
155°	1114	1107	1116	1121	1115	513
165°	1174	1169	1171	1176	1171	331
175°	1200	1195	1196	1201	1193	114
180°	1198	1198	1198	1198	1198	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	577.6	577.2	576.7	576.3	575.8	575.1	574.1	573.0	572.0	571.0	571.7
5°	575.9	575.4	574.9	574.3	573.7	572.9	571.8	570.7	569.6	568.4	569.6
7.5°	570.8	570.4	570.1	569.6	569.3	568.7	567.9	567.0	566.1	565.3	566.6
10°	566.8	566.4	566.1	565.7	565.3	564.8	564.3	563.8	563.2	562.6	564.1
12.5°	560.1	560.2	560.3	560.4	560.4	560.3	559.9	559.5	559.1	558.6	560.1
15°	549.3	549.7	550.1	550.4	550.8	551.0	551.0	551.0	551.0	551.0	552.6
17.5°	535.3	536.1	536.9	537.7	538.4	539.2	539.7	540.3	540.9	541.5	543.2
20°	526.0	526.9	527.8	528.8	529.7	530.5	531.2	532.1	532.8	533.5	535.6
22.5°	516.0	517.1	518.2	519.3	520.3	521.4	522.4	523.4	524.5	525.5	527.6
25°	499.4	500.7	502.0	503.3	504.6	506.1	507.7	509.4	511.0	512.7	514.9
27.5°	479.4	481.5	483.6	485.8	487.9	489.9	491.9	493.8	495.8	497.7	500.5
30°	466.1	468.5	470.9	473.3	475.7	478.1	480.5	482.9	485.3	487.7	490.6
32.5°	451.4	454.1	456.8	459.5	462.3	465.0	467.9	470.7	473.5	476.4	479.8
35°	430.3	433.4	436.6	439.7	442.9	446.2	449.7	453.2	456.7	460.2	464.3
37.5°	407.3	411.0	414.6	418.2	421.8	425.9	430.5	435.0	439.5	444.1	448.7
40°	392.0	396.1	400.1	404.2	408.3	412.8	417.8	422.8	427.8	432.8	437.6
42.5°	377.4	381.4	385.5	389.6	393.6	398.5	404.3	410.0	415.7	421.5	426.7
45°	352.9	357.9	362.9	367.9	372.8	378.6	385.1	391.6	398.0	404.5	410.3
47.5°	328.7	334.2	339.7	345.0	350.5	357.0	364.6	372.2	379.8	387.3	393.4
50°	312.1	317.9	323.6	329.3	335.0	342.1	350.4	358.7	367.0	375.4	381.6
52.5°	296.1	302.1	308.2	314.2	320.2	327.7	336.4	345.2	353.9	362.7	369.2
55°	270.5	277.1	283.8	290.5	297.1	305.2	314.9	324.5	334.1	343.7	350.4
57.5°	245.2	252.7	260.2	267.7	275.2	283.9	293.7	303.5	313.3	323.1	330.3
60°	227.2	235.1	243.1	251.1	259.0	268.3	278.8	289.3	299.9	310.5	317.5
62.5°	211.2	219.5	227.7	235.9	244.3	253.6	264.2	274.7	285.3	295.8	303.3
65°	184.7	193.8	202.9	212.0	221.0	231.0	241.9	252.8	263.7	274.7	282.3
67.5°	160.5	169.9	179.4	188.9	198.4	208.6	219.8	231.0	242.1	253.3	261.0
70°	143.2	152.8	162.4	172.0	181.6	192.2	203.7	215.1	226.6	238.1	246.0
72.5°	127.2	137.1	147.0	156.9	166.8	177.6	189.2	200.8	212.5	224.0	231.9
75°	102.4	112.8	123.1	133.5	143.8	154.9	166.7	178.6	190.4	202.3	210.2
77.5°	78.4	89.3	100.1	110.9	121.7	133.2	145.2	157.3	169.3	181.2	189.2
80°	62.5	73.7	85.0	96.3	107.5	119.2	131.3	143.2	155.2	167.3	175.0
82.5°	49.1	60.3	71.3	82.5	93.7	105.3	117.5	129.6	141.8	154.0	161.8
85°	30.0	41.4	52.9	64.3	75.8	87.5	99.3	111.1	123.0	134.9	142.6
87.5°	16.5	28.0	39.4	50.8	62.3	74.1	86.2	98.3	110.5	122.6	130.4
90°	9.2	22.0	34.9	47.7	60.6	73.7	87.1	100.4	113.8	127.2	135.6
92.5°	25.2	35.0	44.8	54.5	64.3	75.3	87.5	99.6	111.8	124.0	131.8
95°	63.0	65.3	67.7	70.0	72.3	79.7	92.2	104.6	117.1	129.6	137.5
97.5°	117.6	107.5	97.3	87.1	76.9	78.7	92.5	106.2	120.0	133.8	141.4
100°	159.2	139.7	120.2	100.6	81.0	78.1	91.7	105.3	119.0	132.6	141.0
102.5°	204.3	205.0	205.7	206.4	207.0	198.7	181.3	164.0	146.7	129.4	138.0
105°	267.7	278.8	289.9	301.1	312.2	296.3	253.3	210.3	167.4	124.4	133.1
107.5°	340.8	349.8	358.7	367.6	376.6	354.2	300.3	246.5	192.7	138.8	142.8
110°	387.3	395.0	402.8	410.5	418.2	398.8	352.2	305.7	259.0	212.5	199.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	431.6	438.3	445.0	451.8	458.4	459.2	454.0	448.9	443.8	438.6	374.3
115°	501.7	507.0	512.3	517.6	522.9	532.1	545.3	558.4	571.5	584.7	501.1
117.5°	563.5	568.4	573.4	578.4	583.4	591.4	602.4	613.4	624.4	635.4	619.3
120°	609.2	612.8	616.4	620.0	623.7	631.0	641.8	652.6	663.6	674.4	681.9
122.5°	648.0	651.3	654.7	658.0	661.4	668.4	679.1	689.8	700.6	711.3	717.7
125°	706.3	708.8	711.3	713.8	716.3	722.4	731.9	741.5	751.1	760.7	767.0
127.5°	759.9	762.5	765.0	767.6	770.2	775.3	782.8	790.3	797.8	805.3	811.8
130°	793.9	796.7	799.6	802.5	805.4	809.8	815.9	821.9	827.9	833.9	840.4
132.5°	828.5	831.0	833.4	835.8	838.2	842.0	847.1	852.2	857.4	862.5	868.5
135°	872.7	875.8	878.9	882.0	885.1	888.4	891.9	895.5	899.1	902.7	908.6
137.5°	918.4	920.5	922.6	924.7	926.8	929.3	932.1	934.8	937.6	940.4	945.7
140°	948.1	949.5	950.9	952.2	953.6	955.4	958.0	960.4	963.0	965.4	970.1
142.5°	973.1	974.3	975.5	976.7	977.9	979.7	982.3	984.7	987.2	989.8	993.7
145°	1011.5	1011.2	1011.1	1010.9	1010.6	1012.2	1015.5	1018.7	1022.1	1025.3	1027.8
147.5°	1045.6	1044.9	1044.2	1043.4	1042.7	1043.9	1047.2	1050.4	1053.6	1056.9	1058.0
150°	1067.8	1066.4	1065.1	1063.7	1062.4	1063.2	1066.3	1069.4	1072.5	1075.5	1076.8
152.5°	1086.5	1085.0	1083.5	1082.0	1080.5	1081.2	1084.1	1087.0	1090.0	1092.9	1094.1
155°	1113.7	1112.0	1110.3	1108.5	1106.8	1107.1	1109.4	1111.7	1114.0	1116.3	1117.4
157.5°	1135.1	1133.6	1132.1	1130.7	1129.2	1129.3	1130.9	1132.5	1134.1	1135.7	1137.0
160°	1147.5	1146.4	1145.2	1144.0	1142.9	1142.9	1144.0	1145.2	1146.4	1147.5	1148.7
162.5°	1158.6	1157.5	1156.3	1155.1	1154.0	1153.9	1154.9	1155.9	1156.9	1157.9	1159.2
165°	1173.5	1172.3	1171.2	1170.0	1168.9	1168.6	1169.1	1169.8	1170.4	1170.9	1172.2
167.5°	1184.6	1183.5	1182.3	1181.1	1180.0	1179.7	1180.2	1180.7	1181.3	1181.9	1183.2
170°	1190.8	1189.7	1188.5	1187.4	1186.3	1185.9	1186.3	1186.6	1187.0	1187.4	1188.7
172.5°	1195.0	1193.8	1192.7	1191.6	1190.4	1190.0	1190.4	1190.7	1191.2	1191.6	1192.9
175°	1200.4	1199.1	1197.7	1196.4	1195.0	1194.5	1194.9	1195.3	1195.6	1196.0	1197.4
177.5°	1201.3	1200.2	1199.1	1198.0	1196.9	1196.5	1196.6	1196.8	1196.9	1197.1	1198.2
180°	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	572.4	573.2	573.9	574.1	573.8	573.6	573.2	573.0
5°	570.7	571.8	572.9	573.4	573.2	573.0	572.8	572.6
7.5°	567.9	569.3	570.6	571.2	571.0	570.8	570.6	570.5
10°	565.6	567.0	568.6	569.2	569.0	568.8	568.7	568.4
12.5°	561.6	563.0	564.6	565.2	565.0	564.8	564.7	564.4
15°	554.3	556.0	557.7	558.4	558.2	558.0	557.8	557.7
17.5°	544.9	546.7	548.5	549.3	549.3	549.3	549.3	549.3
20°	537.6	539.6	541.6	542.7	542.7	542.7	542.7	542.7
22.5°	529.6	531.7	533.6	534.8	535.1	535.4	535.7	536.0
25°	517.1	519.3	521.5	522.9	523.5	524.1	524.6	525.2
27.5°	503.4	506.1	509.0	510.5	510.9	511.4	511.8	512.2
30°	493.7	496.6	499.5	501.3	501.9	502.5	503.0	503.5
32.5°	483.2	486.7	490.0	492.2	493.3	494.2	495.2	496.2
35°	468.4	472.5	476.5	479.2	480.5	481.8	483.1	484.4
37.5°	453.1	457.6	462.2	465.1	466.5	467.8	469.2	470.6
40°	442.4	447.2	452.0	455.3	456.9	458.6	460.2	461.9
42.5°	431.9	437.2	442.5	446.0	447.6	449.3	450.9	452.6
45°	416.0	421.7	427.5	431.2	433.1	435.0	436.8	438.6
47.5°	399.3	405.4	411.3	415.3	417.4	419.4	421.4	423.5
50°	387.9	394.2	400.6	404.7	406.8	408.8	410.7	412.8
52.5°	375.6	382.0	388.5	392.8	394.9	397.1	399.3	401.5
55°	357.0	363.7	370.4	374.9	377.3	379.7	382.1	384.5
57.5°	337.5	344.6	351.8	356.6	359.1	361.5	363.9	366.4
60°	324.5	331.5	338.6	343.4	345.9	348.5	351.1	353.8
62.5°	310.7	318.2	325.7	330.7	333.0	335.5	337.9	340.4
65°	289.8	297.4	305.0	310.0	312.4	314.8	317.2	319.6
67.5°	268.6	276.3	284.0	289.1	291.6	294.1	296.6	299.1
70°	254.0	261.9	269.9	274.9	277.1	279.4	281.6	283.8
72.5°	239.7	247.4	255.3	260.5	263.2	265.9	268.5	271.2
75°	218.2	226.1	234.1	239.2	241.7	244.0	246.5	248.8
77.5°	197.1	205.0	213.0	218.2	220.8	223.4	225.9	228.5
80°	182.8	190.6	198.4	203.6	206.1	208.7	211.3	213.9
82.5°	169.5	177.2	185.1	190.1	192.6	195.0	197.5	199.9
85°	150.3	158.2	165.9	171.0	173.7	176.3	178.9	181.4
87.5°	138.1	145.9	153.6	158.7	161.1	163.5	166.0	168.4
90°	143.9	152.3	160.6	166.2	168.8	171.3	173.9	176.5
92.5°	139.5	147.2	155.0	160.0	162.6	165.0	167.5	169.9
95°	145.5	153.5	161.5	166.5	168.5	170.6	172.6	174.6
97.5°	149.0	156.6	164.3	169.3	171.7	174.1	176.5	179.0
100°	149.4	157.8	166.2	171.5	174.0	176.4	178.8	181.2
102.5°	146.8	155.5	164.1	169.8	172.4	175.0	177.5	180.1
105°	141.6	150.3	158.8	164.5	167.3	170.2	172.9	175.7
107.5°	146.9	150.9	155.0	158.4	161.3	164.0	166.8	169.7
110°	185.7	172.4	159.1	153.8	156.6	159.4	162.2	165.0



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CATALOG NUMBER: SA2XXDIP-C675D1080U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	310.0	245.6	181.3	150.4	153.1	155.7	158.4	161.0
115°	417.4	333.8	250.2	202.4	190.6	178.8	167.0	155.2
117.5°	603.2	587.1	571.0	541.1	497.5	453.8	410.1	366.4
120°	689.4	696.9	704.3	696.1	672.1	648.2	624.2	600.3
122.5°	724.1	730.6	737.0	738.6	735.2	731.9	728.6	725.3
125°	773.3	779.7	786.0	790.4	792.6	794.8	797.0	799.3
127.5°	818.4	824.9	831.5	835.6	837.4	839.1	840.9	842.6
130°	847.0	853.5	860.1	864.1	865.3	866.6	867.9	869.2
132.5°	874.7	880.8	886.9	890.6	891.9	893.2	894.5	895.7
135°	914.4	920.1	925.9	929.4	930.5	931.6	932.7	933.8
137.5°	951.0	956.3	961.6	964.5	965.1	965.6	966.3	966.9
140°	974.9	979.5	984.2	986.6	986.8	986.9	987.1	987.2
142.5°	997.7	1001.6	1005.5	1007.5	1007.5	1007.5	1007.5	1007.5
145°	1030.2	1032.7	1035.1	1036.3	1036.3	1036.2	1036.2	1036.2
147.5°	1059.2	1060.3	1061.4	1061.8	1061.4	1061.1	1060.8	1060.4
150°	1077.9	1079.0	1080.2	1080.3	1079.3	1078.4	1077.4	1076.4
152.5°	1095.2	1096.4	1097.6	1097.5	1096.2	1094.9	1093.6	1092.4
155°	1118.6	1119.8	1121.0	1120.7	1119.2	1117.7	1116.1	1114.6
157.5°	1138.3	1139.6	1140.9	1140.8	1139.4	1137.8	1136.4	1134.8
160°	1149.8	1151.0	1152.1	1152.0	1150.7	1149.3	1148.0	1146.6
162.5°	1160.5	1161.8	1163.2	1162.9	1161.3	1159.7	1158.0	1156.3
165°	1173.6	1174.9	1176.3	1176.3	1174.9	1173.6	1172.2	1170.9
167.5°	1184.5	1185.9	1187.2	1187.0	1185.3	1183.6	1181.9	1180.1
170°	1190.1	1191.4	1192.8	1192.5	1190.8	1189.1	1187.4	1185.6
172.5°	1194.3	1195.6	1196.9	1196.8	1195.0	1193.3	1191.6	1189.8
175°	1198.7	1200.1	1201.4	1201.2	1199.2	1197.3	1195.4	1193.4
177.5°	1199.2	1200.3	1201.4	1201.3	1199.9	1198.5	1197.1	1195.7
180°	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8	1197.8

(END OF REPORT)