

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: P332261-830

Luminaire Tested: **S123RDIP-S340D1025U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332261-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S340D1025U830-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5088.5 lumens
Efficiency: N/A
Efficacy: 136.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

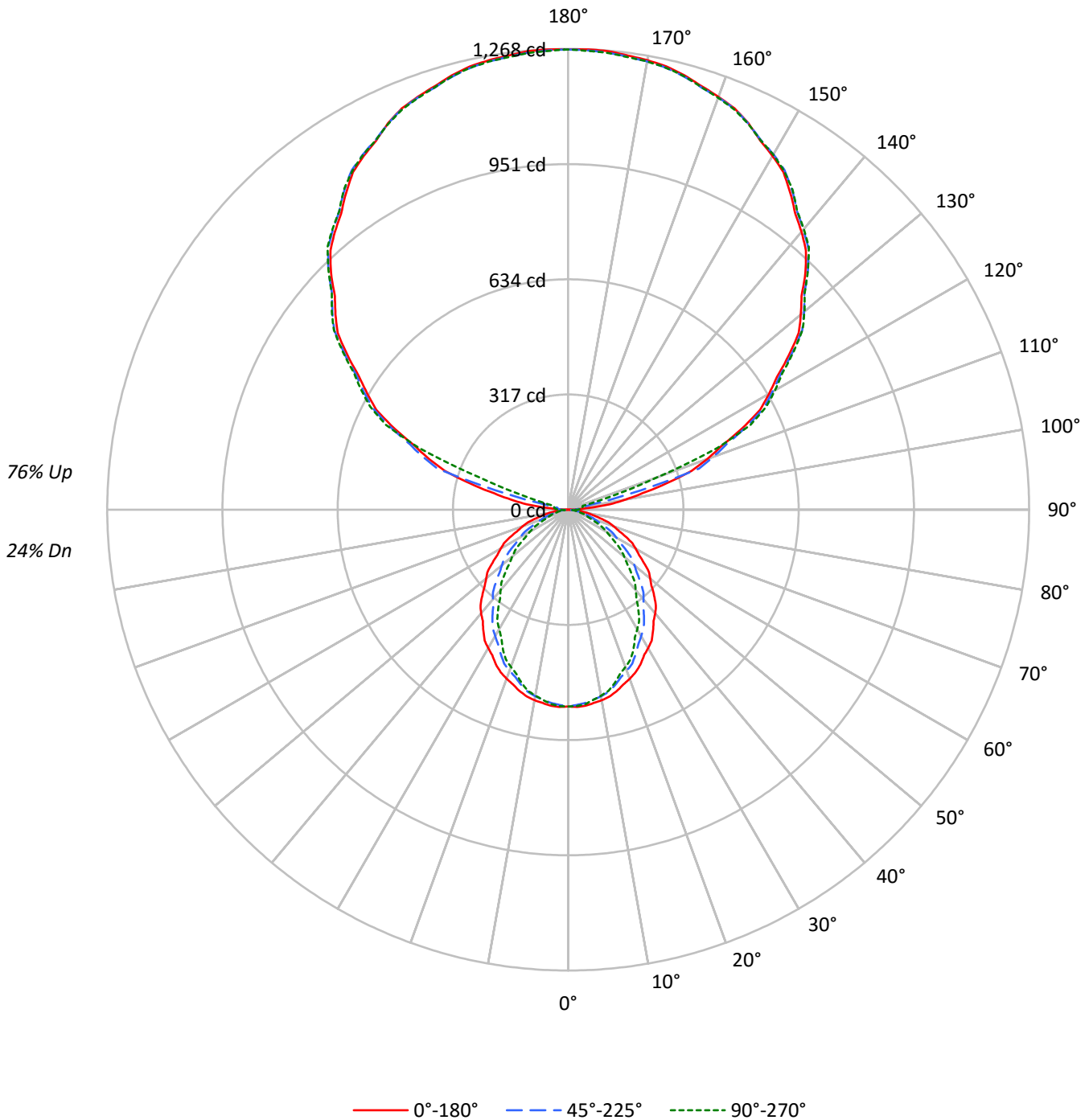
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																				
0	101	101	101	101	90	90	90	90	69	69	69		50	50	50		32	32	32	24
1	92	88	84	81	82	78	75	73	60	58	57		44	43	42		29	28	28	21
2	84	77	71	66	74	69	64	60	53	50	47		39	37	35		25	24	23	17
3	77	68	61	55	68	61	55	50	47	43	40		34	32	30		23	21	20	15
4	70	60	52	47	62	54	47	42	42	37	34		31	28	25		20	19	17	13
5	64	53	46	40	57	48	41	36	37	33	29		27	24	22		18	17	15	11
6	59	48	40	34	52	43	36	31	33	29	25		25	22	19		17	15	13	10
7	55	43	35	30	48	39	32	27	30	26	22		22	19	17		15	13	12	9
8	50	39	31	26	45	35	29	24	27	23	20		21	17	15		14	12	11	8
9	47	35	28	23	42	32	26	21	25	21	17		19	16	13		13	11	10	7
10	44	32	25	21	39	29	23	19	23	19	16		17	14	12		12	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5829	5829	5829
5°	5851	5770	5804
10°	5818	5698	5678
15°	5756	5565	5506
20°	5669	5399	5271
25°	5582	5211	5044
30°	5464	4994	4721
35°	5344	4778	4427
40°	5233	4523	4061
45°	5087	4271	3731
50°	4928	3985	3361
55°	4763	3659	3016
60°	4613	3309	2637
65°	4419	2932	2259
70°	4173	2458	1825
75°	3818	1938	1718
80°	3403	1717	1574
85°	2878	1519	1408



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.9	1.0
10°-20°	141.5	2.8
20°-30°	203.7	4.0
30°-40°	229.5	4.5
40°-50°	219.5	4.3
50°-60°	179.8	3.5
60°-70°	121.3	2.4
70°-80°	61.0	1.2
80°-90°	19.7	0.4
90°-100°	46.0	0.9
100°-110°	219.4	4.3
110°-120°	527.0	10.4
120°-130°	671.1	13.2
130°-140°	717.1	14.1
140°-150°	670.6	13.2
150°-160°	540.9	10.6
160°-170°	349.1	6.9
170°-180°	120.3	2.4
0°-30°	396.1	7.8
0°-40°	625.5	12.3
0°-60°	1024.8	20.1
0°-90°	1226.8	24.1
90°-120°	792.5	15.6
90°-150°	2851.3	56.0
90°-180°	3862.0	75.9
0°-180°	5088.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	542	542	542	542	542	
5°	542	539	534	538	537	51
15°	516	511	499	497	494	145
25°	470	458	439	430	425	216
35°	407	390	364	345	337	254
45°	334	314	281	256	245	258
55°	254	231	195	170	161	228
65°	174	149	115	94	89	172
75°	92	71	47	42	41	98
85°	23	14	12	11	11	26
90°	1	10	23	26	28	4
95°	57	22	29	35	36	71
105°	280	285	206	49	41	297
115°	526	532	540	549	553	519
125°	741	749	753	754	756	662
135°	923	928	932	935	932	710
145°	1065	1071	1074	1075	1075	666
155°	1173	1171	1172	1176	1171	540
165°	1237	1234	1233	1240	1234	349
175°	1266	1262	1262	1268	1262	120
180°	1266	1266	1266	1266	1266	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	541.5	541.5	541.5	541.5	541.5	541.5	541.5	541.5	541.5	541.5	541.5
2.5°	543.3	542.9	542.6	542.3	542.1	541.4	540.5	539.5	538.6	537.6	538.5
5°	541.5	541.0	540.5	540.1	539.5	538.8	537.5	536.4	535.2	534.0	534.9
7.5°	536.5	535.9	535.5	534.9	534.4	533.4	531.9	530.4	528.8	527.3	527.7
10°	532.3	531.6	530.9	530.3	529.5	528.3	526.6	524.8	523.0	521.3	521.4
12.5°	526.3	525.6	524.8	524.1	523.3	521.8	519.6	517.6	515.4	513.2	513.1
15°	516.5	515.4	514.3	513.2	512.2	510.3	507.6	504.8	502.1	499.4	498.9
17.5°	504.1	502.8	501.6	500.3	499.1	496.7	493.2	489.7	486.4	482.9	481.8
20°	494.9	493.4	491.8	490.3	488.7	486.1	482.4	478.6	474.9	471.3	470.0
22.5°	484.7	483.0	481.2	479.4	477.6	474.8	470.8	466.8	462.9	458.9	457.3
25°	470.0	467.5	465.1	462.6	460.1	456.7	452.2	447.7	443.2	438.8	436.7
27.5°	451.9	449.2	446.5	443.8	441.1	437.3	432.3	427.3	422.3	417.3	414.4
30°	439.6	436.7	433.8	430.8	427.9	423.7	418.2	412.7	407.3	401.8	398.5
32.5°	427.3	424.0	420.7	417.4	414.1	409.5	403.7	397.9	392.2	386.3	382.8
35°	406.7	403.1	399.6	396.2	392.7	387.9	381.8	375.7	369.7	363.6	359.5
37.5°	385.8	381.8	378.0	374.1	370.1	365.0	358.5	352.0	345.6	339.1	334.4
40°	372.4	368.2	363.8	359.6	355.2	349.6	342.7	335.7	328.9	321.9	316.9
42.5°	357.3	353.0	348.7	344.4	340.2	334.4	327.3	320.1	312.9	305.8	300.2
45°	334.2	329.8	325.5	321.0	316.6	310.7	303.2	295.7	288.1	280.6	275.0
47.5°	311.1	306.3	301.4	296.6	291.8	285.7	278.1	270.6	263.2	255.6	249.6
50°	294.3	289.6	285.1	280.5	275.9	269.7	261.7	253.8	245.9	238.0	232.0
52.5°	279.2	274.2	269.2	264.2	259.2	252.8	245.0	237.1	229.3	221.5	215.3
55°	253.8	249.0	244.3	239.5	234.7	228.2	219.9	211.6	203.3	195.0	189.4
57.5°	230.5	225.3	220.1	214.8	209.6	202.8	194.5	186.2	177.9	169.6	164.2
60°	214.3	209.0	203.6	198.2	192.8	186.2	178.0	169.9	161.8	153.7	148.5
62.5°	198.1	192.7	187.4	182.1	176.7	169.9	161.8	153.7	145.6	137.5	132.6
65°	173.5	168.1	162.8	157.4	152.0	145.5	137.9	130.3	122.7	115.1	110.3
67.5°	148.8	143.4	137.9	132.5	127.1	120.7	113.4	106.1	98.8	91.5	87.9
70°	132.6	127.3	122.1	116.8	111.6	105.5	98.7	91.8	85.0	78.1	74.7
72.5°	116.5	111.3	106.1	100.9	95.7	90.0	83.8	77.6	71.4	65.1	62.4
75°	91.8	87.1	82.4	77.8	73.0	68.1	62.7	57.3	51.9	46.6	45.6
77.5°	69.3	65.0	60.8	56.6	52.4	48.5	45.1	41.6	38.2	34.7	34.2
80°	54.9	50.9	46.9	42.9	38.9	35.9	33.8	31.8	29.7	27.7	27.3
82.5°	41.2	37.7	34.3	30.8	27.3	25.2	24.2	23.3	22.3	21.3	21.0
85°	23.3	21.1	18.9	16.9	14.7	13.5	13.2	12.9	12.6	12.3	12.1
87.5°	8.6	8.2	7.7	7.3	6.9	6.9	7.4	8.0	8.6	9.0	9.1
90°	0.9	3.0	5.1	7.3	9.3	11.7	14.4	17.2	19.9	22.6	23.4
92.5°	17.5	16.9	16.3	15.7	15.2	15.9	17.9	20.0	22.1	24.1	25.4
95°	57.4	48.8	40.2	31.7	23.1	20.0	22.2	24.6	26.9	29.1	30.6
97.5°	115.4	111.5	107.6	103.8	99.9	90.5	75.5	60.4	45.3	30.3	32.0
100°	159.0	163.2	167.4	171.5	175.7	161.5	128.8	96.2	63.6	31.0	32.7
102.5°	208.7	211.7	214.7	217.7	220.7	204.4	168.8	133.2	97.6	61.9	56.7
105°	280.3	282.7	284.9	287.3	289.5	281.3	262.5	243.6	224.9	206.0	169.0
107.5°	356.0	357.9	359.7	361.6	363.4	365.8	368.7	371.7	374.7	377.7	350.5
110°	406.4	408.1	409.7	411.4	413.1	415.1	417.4	419.7	422.0	424.3	417.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	454.6	456.1	457.6	459.1	460.6	462.5	464.9	467.1	469.4	471.7	471.8
115°	525.9	527.2	528.4	529.7	530.9	532.5	534.3	536.2	538.1	540.0	542.2
117.5°	594.9	596.5	598.0	599.6	601.2	602.4	603.3	604.4	605.3	606.2	607.9
120°	637.8	639.7	641.6	643.5	645.4	646.7	647.2	647.9	648.6	649.1	650.8
122.5°	681.6	683.1	684.6	686.2	687.7	688.9	689.7	690.5	691.3	692.0	693.2
125°	741.3	743.0	744.7	746.4	748.0	749.3	750.2	750.9	751.8	752.6	753.1
127.5°	799.3	801.0	802.7	804.3	806.0	807.3	808.3	809.4	810.3	811.3	812.0
130°	835.5	837.1	838.8	840.5	842.2	843.4	844.2	845.1	845.8	846.7	847.5
132.5°	870.1	871.8	873.4	875.1	876.8	877.9	878.5	879.2	880.0	880.6	881.5
135°	922.9	924.2	925.4	926.7	927.9	929.0	929.8	930.7	931.5	932.4	932.9
137.5°	968.1	969.7	971.3	972.9	974.4	975.4	975.9	976.4	976.9	977.3	978.3
140°	998.2	999.5	1000.7	1001.9	1003.2	1004.2	1004.8	1005.4	1006.1	1006.6	1007.5
142.5°	1026.1	1027.3	1028.5	1029.8	1031.0	1032.0	1032.6	1033.2	1033.9	1034.5	1035.2
145°	1065.0	1066.5	1067.9	1069.4	1070.8	1071.8	1072.2	1072.6	1073.0	1073.5	1073.8
147.5°	1101.6	1102.7	1103.6	1104.6	1105.5	1106.2	1106.6	1107.0	1107.5	1107.9	1108.3
150°	1124.3	1124.9	1125.5	1126.1	1126.7	1127.3	1127.7	1128.1	1128.5	1129.0	1129.4
152.5°	1144.5	1144.9	1145.2	1145.5	1145.8	1146.0	1146.2	1146.5	1146.8	1147.0	1147.7
155°	1173.2	1172.7	1172.3	1172.0	1171.5	1171.4	1171.6	1171.8	1172.1	1172.2	1173.3
157.5°	1195.3	1195.3	1195.3	1195.2	1195.2	1195.0	1194.9	1194.7	1194.5	1194.2	1195.5
160°	1208.9	1208.7	1208.5	1208.3	1208.1	1207.9	1207.7	1207.5	1207.2	1207.0	1208.3
162.5°	1221.7	1221.2	1220.6	1220.1	1219.6	1219.2	1219.0	1218.7	1218.5	1218.3	1219.7
165°	1237.2	1236.5	1235.9	1235.3	1234.6	1234.3	1234.0	1233.8	1233.6	1233.4	1235.0
167.5°	1249.2	1248.4	1247.5	1246.7	1245.9	1245.4	1245.4	1245.4	1245.4	1245.4	1247.1
170°	1255.9	1255.1	1254.3	1253.5	1252.6	1252.2	1252.2	1252.2	1252.2	1252.2	1253.9
172.5°	1260.5	1259.5	1258.5	1257.4	1256.5	1256.0	1256.2	1256.4	1256.5	1256.7	1258.4
175°	1266.3	1265.3	1264.2	1263.2	1262.2	1261.7	1261.9	1262.2	1262.3	1262.5	1264.0
177.5°	1267.8	1267.0	1266.1	1265.3	1264.5	1264.1	1264.3	1264.5	1264.6	1264.8	1266.1
180°	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	541.5	541.5	541.5	541.5	541.5	541.5	541.5	541.5
2.5°	539.3	540.2	541.1	541.4	541.3	541.1	540.9	540.8
5°	535.8	536.7	537.5	537.9	537.7	537.5	537.3	537.2
7.5°	528.3	528.8	529.2	529.3	529.0	528.7	528.3	528.0
10°	521.5	521.6	521.7	521.5	521.0	520.6	520.0	519.5
12.5°	513.1	513.0	513.0	512.6	512.1	511.5	511.0	510.4
15°	498.3	497.9	497.4	496.8	496.2	495.4	494.7	494.1
17.5°	480.8	479.8	478.7	477.7	476.6	475.6	474.7	473.6
20°	468.7	467.4	466.2	465.0	463.7	462.6	461.5	460.2
22.5°	455.8	454.2	452.6	451.3	450.2	449.1	448.0	447.0
25°	434.6	432.6	430.6	429.0	427.9	426.9	425.7	424.7
27.5°	411.6	408.8	406.0	403.7	402.0	400.4	398.8	397.1
30°	395.2	391.9	388.6	386.2	384.6	383.0	381.4	379.8
32.5°	379.1	375.5	371.8	369.2	367.6	366.0	364.3	362.7
35°	355.2	351.0	346.9	343.8	342.1	340.4	338.6	336.9
37.5°	329.6	324.8	320.1	316.6	314.4	312.3	310.1	307.9
40°	311.8	306.7	301.6	297.9	295.7	293.5	291.2	289.0
42.5°	294.6	289.2	283.6	279.8	277.8	275.8	273.8	271.7
45°	269.5	263.9	258.4	254.4	252.1	249.8	247.4	245.1
47.5°	243.5	237.4	231.4	227.3	225.3	223.2	221.0	219.0
50°	225.9	219.9	213.9	209.7	207.5	205.2	202.9	200.7
52.5°	209.0	202.6	196.4	192.3	190.2	188.2	186.2	184.2
55°	183.7	178.0	172.4	168.5	166.6	164.7	162.7	160.7
57.5°	158.8	153.4	148.2	144.6	143.0	141.3	139.7	138.0
60°	143.2	137.9	132.6	129.1	127.5	125.8	124.2	122.5
62.5°	127.6	122.7	117.7	114.3	112.6	110.9	109.1	107.4
65°	105.5	100.8	96.0	93.0	91.9	90.9	89.8	88.7
67.5°	84.4	80.8	77.2	74.8	73.7	72.6	71.4	70.3
70°	71.4	68.0	64.5	62.3	61.2	60.1	59.0	58.0
72.5°	59.6	56.8	54.0	52.4	51.9	51.5	51.1	50.6
75°	44.6	43.6	42.6	42.0	41.8	41.7	41.5	41.3
77.5°	33.6	33.1	32.6	32.2	32.0	31.9	31.7	31.5
80°	27.1	26.8	26.5	26.3	26.0	25.8	25.6	25.4
82.5°	20.7	20.5	20.2	20.0	20.0	19.9	19.9	19.9
85°	11.9	11.7	11.5	11.4	11.4	11.4	11.4	11.4
87.5°	9.2	9.3	9.4	9.5	9.5	9.5	9.5	9.5
90°	24.2	25.1	25.9	26.6	27.0	27.4	27.8	28.2
92.5°	26.8	28.1	29.4	30.3	30.4	30.7	31.0	31.2
95°	32.0	33.6	35.1	35.7	35.7	35.7	35.7	35.7
97.5°	33.6	35.3	36.9	37.9	38.2	38.4	38.5	38.7
100°	34.4	36.1	37.7	38.6	38.9	39.1	39.3	39.5
102.5°	51.6	46.4	41.2	38.7	39.1	39.5	39.9	40.2
105°	132.1	95.0	58.1	39.7	40.2	40.5	41.0	41.4
107.5°	323.4	296.2	269.1	241.6	213.7	185.8	157.9	130.0
110°	410.5	403.6	396.7	378.3	348.4	318.5	288.6	258.7



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CATALOG NUMBER: S123RDIP-S340D1025U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	471.9	472.1	472.2	469.1	462.8	456.5	450.2	443.8
115°	544.2	546.3	548.4	549.9	550.6	551.5	552.3	553.2
117.5°	609.6	611.2	612.9	613.9	614.1	614.2	614.3	614.5
120°	652.5	654.1	655.8	656.7	656.7	656.7	656.7	656.7
122.5°	694.4	695.6	696.7	697.4	697.6	697.8	697.9	698.0
125°	753.5	753.8	754.3	754.7	755.2	755.5	756.0	756.4
127.5°	812.7	813.3	814.0	814.2	813.7	813.3	812.8	812.5
130°	848.4	849.2	850.1	850.3	849.9	849.4	849.0	848.6
132.5°	882.2	883.1	883.9	884.0	883.4	882.9	882.3	881.7
135°	933.6	934.2	934.8	934.8	934.2	933.6	932.9	932.4
137.5°	979.3	980.3	981.3	981.6	981.2	980.8	980.3	980.0
140°	1008.3	1009.2	1010.0	1010.2	1009.7	1009.4	1009.0	1008.5
142.5°	1035.9	1036.5	1037.2	1037.2	1036.6	1036.0	1035.5	1034.9
145°	1074.3	1074.7	1075.2	1075.3	1075.3	1075.3	1075.3	1075.3
147.5°	1108.7	1109.1	1109.6	1109.3	1108.3	1107.4	1106.4	1105.4
150°	1129.8	1130.2	1130.7	1130.5	1129.9	1129.3	1128.6	1128.0
152.5°	1148.5	1149.2	1150.0	1149.9	1149.0	1148.0	1147.1	1146.0
155°	1174.3	1175.4	1176.4	1176.3	1175.1	1173.8	1172.5	1171.3
157.5°	1196.7	1198.0	1199.3	1199.1	1197.4	1195.8	1194.2	1192.6
160°	1209.6	1210.8	1212.0	1211.9	1210.5	1209.0	1207.6	1206.1
162.5°	1221.2	1222.6	1224.0	1224.1	1222.8	1221.4	1220.2	1218.9
165°	1236.7	1238.4	1240.1	1240.2	1238.7	1237.3	1235.8	1234.4
167.5°	1248.8	1250.5	1252.1	1252.1	1250.5	1248.8	1247.1	1245.4
170°	1255.6	1257.3	1258.9	1258.9	1257.3	1255.6	1253.9	1252.2
172.5°	1260.1	1261.7	1263.4	1263.3	1261.5	1259.6	1257.8	1255.9
175°	1265.5	1267.0	1268.4	1268.3	1266.6	1265.0	1263.3	1261.6
177.5°	1267.4	1268.9	1270.2	1270.0	1268.3	1266.7	1265.0	1263.3
180°	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3

(END OF REPORT)