

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: P332309-830

Luminaire Tested: **S123RDIP-S775D585U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332309-830
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-S775D585U830-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4957.6 lumens
Efficiency: N/A
Efficacy: 123.0 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: General Diffuse

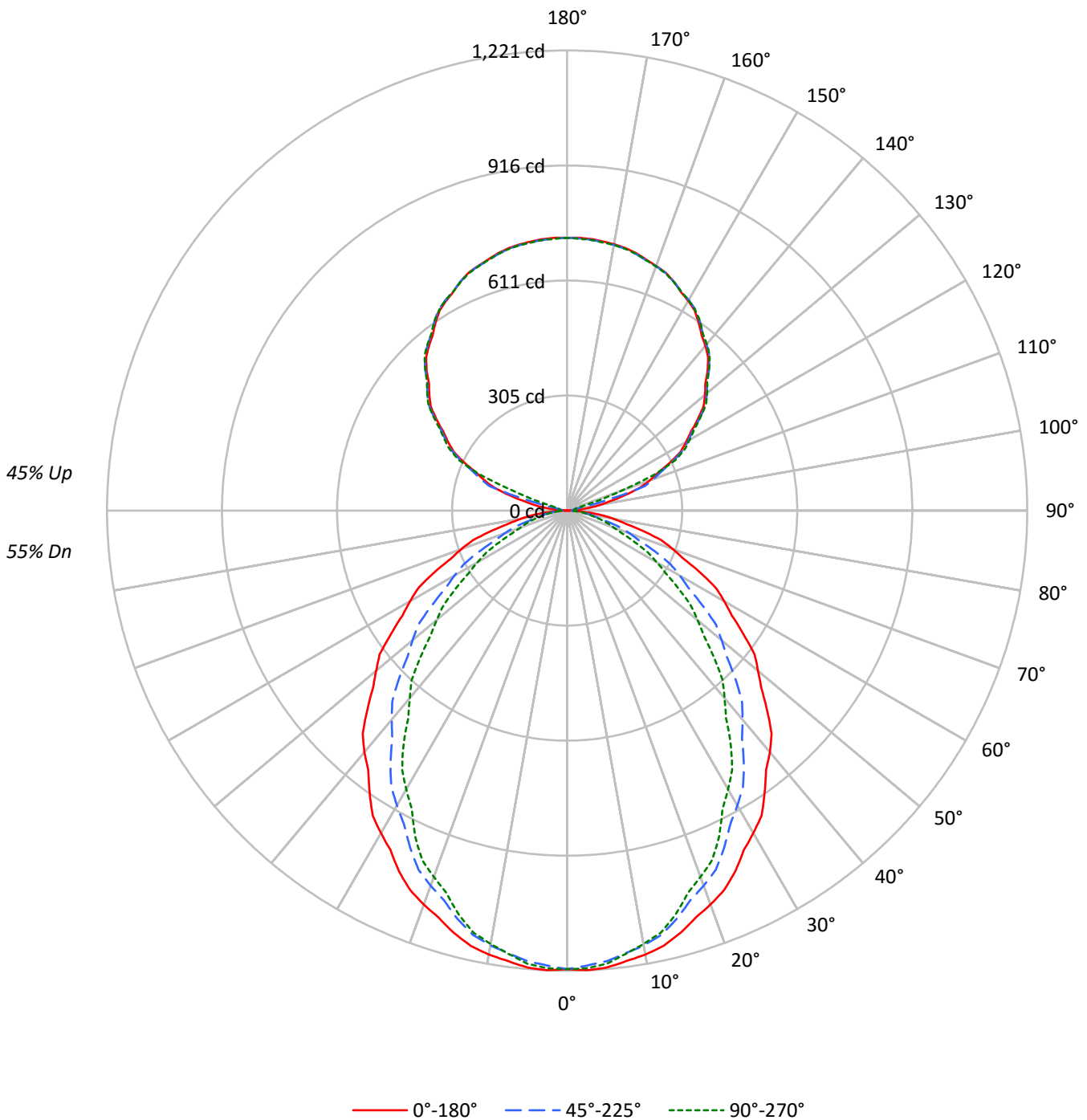
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	99	95	91	88	92	89	85	82	76	74	72	65	63	62	55	53	52	47
2	91	84	77	72	84	78	73	68	67	63	60	58	55	52	49	46	45	40
3	83	74	67	61	77	69	62	57	60	55	51	51	48	44	43	41	38	35
4	76	65	58	52	71	61	54	49	53	48	44	46	42	38	39	36	33	30
5	70	59	50	45	65	55	48	42	48	42	38	41	37	34	35	32	29	26
6	65	53	45	39	60	49	42	37	43	37	33	37	33	30	32	29	26	23
7	60	48	40	34	56	45	38	33	39	34	29	34	30	26	29	26	23	21
8	56	43	36	30	52	41	34	29	36	30	26	31	27	24	27	23	21	19
9	52	40	32	27	48	37	31	26	33	27	24	29	24	21	25	21	19	17
10	49	36	29	25	45	34	28	23	30	25	21	27	22	19	23	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13099	13099	13099
5°	13149	12967	13042
10°	13074	12804	12761
15°	12933	12504	12373
20°	12741	12129	11848
25°	12542	11709	11334
30°	12279	11225	10611
35°	12009	10738	9947
40°	11760	10165	9125
45°	11432	9601	8383
50°	11072	8957	7552
55°	10704	8223	6778
60°	10368	7436	5927
65°	9928	6584	5076
70°	9379	5530	4101
75°	8576	4350	3855
80°	7649	3856	3546
85°	6459	3409	3162



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.3	2.3
10°-20°	317.9	6.4
20°-30°	457.8	9.2
30°-40°	515.7	10.4
40°-50°	493.3	10.0
50°-60°	404.0	8.1
60°-70°	272.6	5.5
70°-80°	137.1	2.8
80°-90°	38.3	0.8
90°-100°	26.3	0.5
100°-110°	125.4	2.5
110°-120°	301.2	6.1
120°-130°	383.5	7.7
130°-140°	409.8	8.3
140°-150°	383.2	7.7
150°-160°	309.1	6.2
160°-170°	199.5	4.0
170°-180°	68.7	1.4
0°-30°	890.0	18.0
0°-40°	1405.7	28.4
0°-60°	2303.0	46.5
0°-90°	2751.0	55.5
90°-120°	452.8	9.1
90°-150°	1629.3	32.9
90°-180°	2207.0	44.5
0°-180°	4957.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1217	1217	1217	1217	1217	
5°	1217	1212	1200	1208	1207	115
15°	1161	1149	1122	1117	1110	327
25°	1056	1030	986	966	954	485
35°	914	877	817	776	757	572
45°	751	705	631	576	551	579
55°	570	520	438	383	361	511
65°	390	334	258	212	199	386
75°	206	159	105	95	93	220
85°	52	32	28	26	26	59
90°	1	6	13	15	16	4
95°	33	12	17	20	20	41
105°	160	163	118	28	24	170
115°	300	304	309	314	316	297
125°	424	428	430	431	432	378
135°	527	531	533	534	533	406
145°	608	612	613	614	614	381
155°	670	669	670	672	669	309
165°	707	705	705	709	705	200
175°	724	721	721	725	721	69
180°	724	724	724	724	724	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1220.8	1220.1	1219.4	1218.7	1218.0	1216.6	1214.5	1212.4	1210.3	1208.2	1210.1
5°	1216.9	1215.8	1214.7	1213.6	1212.5	1210.6	1208.0	1205.3	1202.7	1200.1	1202.0
7.5°	1205.6	1204.5	1203.2	1202.0	1200.9	1198.5	1195.1	1191.8	1188.4	1184.9	1186.0
10°	1196.2	1194.6	1193.1	1191.6	1190.0	1187.2	1183.3	1179.4	1175.4	1171.5	1171.7
12.5°	1182.7	1181.0	1179.3	1177.6	1175.9	1172.6	1167.8	1163.0	1158.1	1153.3	1153.2
15°	1160.6	1158.2	1155.7	1153.4	1150.9	1146.7	1140.6	1134.4	1128.2	1122.1	1121.1
17.5°	1132.7	1130.0	1127.2	1124.4	1121.5	1116.3	1108.4	1100.6	1092.8	1085.1	1082.7
20°	1112.3	1108.7	1105.2	1101.7	1098.3	1092.3	1083.9	1075.6	1067.3	1058.9	1056.1
22.5°	1089.4	1085.3	1081.3	1077.2	1073.2	1066.8	1057.9	1049.0	1040.2	1031.3	1027.7
25°	1056.0	1050.6	1045.0	1039.5	1034.1	1026.2	1016.2	1006.1	996.0	985.9	981.3
27.5°	1015.5	1009.5	1003.4	997.4	991.4	982.7	971.5	960.3	949.0	937.7	931.3
30°	987.9	981.3	974.8	968.2	961.6	952.2	939.9	927.6	915.3	903.1	895.6
32.5°	960.3	952.8	945.4	937.9	930.5	920.2	907.2	894.3	881.3	868.3	860.2
35°	913.9	906.0	898.1	890.2	882.3	871.6	858.0	844.3	830.8	817.2	807.8
37.5°	867.0	858.1	849.3	840.6	831.8	820.2	805.7	791.2	776.7	762.1	751.4
40°	836.9	827.3	817.6	807.9	798.3	785.7	770.2	754.6	739.0	723.4	712.0
42.5°	803.0	793.3	783.6	774.0	764.4	751.5	735.4	719.3	703.2	687.1	674.7
45°	751.0	741.2	731.3	721.4	711.5	698.2	681.3	664.4	647.5	630.7	618.1
47.5°	699.2	688.3	677.5	666.7	655.8	642.0	625.1	608.1	591.3	574.4	560.8
50°	661.2	650.9	640.6	630.3	620.0	606.0	588.2	570.4	552.7	534.9	521.3
52.5°	627.3	616.1	604.9	593.7	582.6	568.2	550.5	533.0	515.4	497.8	483.7
55°	570.4	559.7	548.9	538.2	527.4	512.7	494.1	475.5	456.9	438.2	425.5
57.5°	517.9	506.2	494.6	482.8	471.1	455.9	437.2	418.4	399.6	381.0	368.9
60°	481.6	469.6	457.5	445.4	433.4	418.2	400.0	381.8	363.6	345.4	333.6
62.5°	445.3	433.2	421.1	409.1	397.1	381.9	363.7	345.5	327.3	309.1	297.9
65°	389.8	377.8	365.7	353.6	341.6	327.0	309.9	292.8	275.7	258.5	247.8
67.5°	334.4	322.2	310.0	297.7	285.6	271.3	254.9	238.5	222.1	205.7	197.7
70°	298.0	286.3	274.4	262.5	250.7	237.0	221.7	206.4	191.1	175.7	168.0
72.5°	261.7	250.1	238.4	226.7	215.1	202.3	188.3	174.4	160.4	146.5	140.2
75°	206.2	195.8	185.2	174.7	164.2	152.9	140.8	128.8	116.7	104.6	102.5
77.5°	155.7	146.2	136.7	127.1	117.6	109.1	101.2	93.5	85.8	77.9	76.8
80°	123.4	114.3	105.4	96.4	87.4	80.6	76.0	71.4	66.8	62.2	61.5
82.5°	92.6	84.8	77.0	69.3	61.5	56.6	54.4	52.2	50.1	48.0	47.3
85°	52.3	47.5	42.7	37.8	33.0	30.3	29.6	28.9	28.3	27.6	27.2
87.5°	19.0	17.3	15.6	13.9	12.3	11.6	11.9	12.3	12.5	12.8	12.7
90°	0.6	1.7	2.9	4.1	5.3	6.7	8.2	9.8	11.3	12.9	13.4
92.5°	10.0	9.7	9.3	9.0	8.7	9.0	10.3	11.4	12.6	13.8	14.5
95°	32.8	27.9	23.0	18.1	13.2	11.4	12.7	14.0	15.4	16.7	17.5
97.5°	65.9	63.7	61.5	59.3	57.1	51.7	43.1	34.5	25.9	17.3	18.3
100°	90.9	93.2	95.7	98.0	100.4	92.3	73.6	55.0	36.4	17.7	18.7
102.5°	119.2	120.9	122.7	124.4	126.1	116.8	96.4	76.1	55.7	35.3	32.4
105°	160.2	161.6	162.9	164.1	165.4	160.7	150.0	139.2	128.5	117.7	96.6
107.5°	203.4	204.4	205.6	206.6	207.6	209.0	210.7	212.4	214.1	215.7	200.3
110°	232.2	233.2	234.1	235.1	236.0	237.2	238.5	239.8	241.1	242.4	238.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	259.8	260.6	261.5	262.3	263.2	264.3	265.6	266.9	268.2	269.6	269.7
115°	300.5	301.2	301.9	302.7	303.4	304.3	305.4	306.4	307.5	308.6	309.8
117.5°	340.0	340.8	341.8	342.6	343.5	344.2	344.8	345.3	345.9	346.4	347.4
120°	364.5	365.5	366.6	367.7	368.8	369.5	369.9	370.2	370.6	370.9	371.9
122.5°	389.5	390.3	391.2	392.1	392.9	393.6	394.1	394.5	395.0	395.5	396.2
125°	423.6	424.6	425.6	426.5	427.4	428.2	428.7	429.1	429.6	430.1	430.3
127.5°	456.8	457.7	458.6	459.6	460.5	461.3	461.8	462.5	463.1	463.6	464.0
130°	477.4	478.3	479.3	480.2	481.2	481.9	482.4	482.9	483.3	483.8	484.3
132.5°	497.2	498.1	499.1	500.0	501.0	501.6	502.0	502.4	502.8	503.2	503.7
135°	527.4	528.1	528.8	529.5	530.3	530.8	531.3	531.8	532.3	532.7	533.1
137.5°	553.2	554.1	555.0	555.9	556.8	557.4	557.6	557.9	558.2	558.5	559.0
140°	570.3	571.1	571.8	572.5	573.3	573.8	574.1	574.5	574.9	575.2	575.7
142.5°	586.3	587.0	587.8	588.4	589.2	589.7	590.0	590.4	590.8	591.2	591.5
145°	608.5	609.4	610.2	611.1	611.9	612.5	612.7	612.9	613.1	613.4	613.6
147.5°	629.5	630.1	630.7	631.1	631.7	632.1	632.4	632.5	632.8	633.1	633.3
150°	642.4	642.8	643.1	643.5	643.9	644.1	644.4	644.6	644.9	645.1	645.4
152.5°	654.0	654.2	654.3	654.5	654.7	654.9	655.0	655.2	655.3	655.4	655.8
155°	670.3	670.1	669.9	669.7	669.4	669.4	669.5	669.6	669.7	669.9	670.4
157.5°	683.1	683.1	683.0	683.0	683.0	682.9	682.8	682.7	682.5	682.4	683.2
160°	690.8	690.7	690.6	690.4	690.3	690.2	690.0	689.9	689.8	689.8	690.4
162.5°	698.1	697.8	697.5	697.2	696.8	696.6	696.5	696.4	696.3	696.2	697.0
165°	706.9	706.5	706.2	705.9	705.5	705.2	705.1	705.0	704.9	704.7	705.8
167.5°	713.8	713.3	712.8	712.4	711.9	711.6	711.6	711.6	711.6	711.6	712.7
170°	717.7	717.2	716.7	716.2	715.8	715.5	715.5	715.5	715.5	715.5	716.5
172.5°	720.3	719.7	719.1	718.5	717.9	717.7	717.8	717.9	718.0	718.1	719.1
175°	723.6	723.0	722.4	721.8	721.2	721.0	721.0	721.2	721.3	721.4	722.3
177.5°	724.4	724.0	723.5	723.0	722.6	722.4	722.5	722.6	722.6	722.7	723.5
180°	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1212.0	1214.0	1215.9	1216.7	1216.4	1216.0	1215.6	1215.3
5°	1204.0	1206.0	1208.0	1208.7	1208.3	1207.9	1207.4	1207.0
7.5°	1187.1	1188.2	1189.3	1189.5	1188.7	1188.0	1187.2	1186.5
10°	1172.0	1172.1	1172.3	1172.0	1170.8	1169.7	1168.7	1167.5
12.5°	1153.0	1152.9	1152.8	1152.1	1150.8	1149.5	1148.3	1147.0
15°	1119.9	1118.8	1117.8	1116.4	1114.9	1113.3	1111.8	1110.3
17.5°	1080.3	1078.1	1075.7	1073.5	1071.1	1068.8	1066.6	1064.3
20°	1053.3	1050.4	1047.5	1044.8	1042.2	1039.5	1036.9	1034.3
22.5°	1024.3	1020.7	1017.1	1014.1	1011.6	1009.2	1006.7	1004.3
25°	976.8	972.1	967.5	964.0	961.6	959.1	956.8	954.3
27.5°	924.9	918.6	912.2	907.1	903.4	899.8	896.1	892.4
30°	888.2	880.6	873.2	867.7	864.2	860.7	857.1	853.7
32.5°	852.0	843.9	835.7	829.7	826.0	822.4	818.7	815.0
35°	798.3	788.9	779.5	772.8	768.8	764.9	760.9	757.0
37.5°	740.6	730.0	719.3	711.5	706.6	701.7	696.9	692.0
40°	700.6	689.2	677.8	669.6	664.5	659.5	654.4	649.4
42.5°	662.1	649.7	637.3	628.8	624.2	619.7	615.2	610.7
45°	605.7	593.1	580.6	571.7	566.5	561.2	556.0	550.7
47.5°	547.1	533.6	520.0	510.9	506.1	501.4	496.8	492.1
50°	507.7	494.1	480.5	471.2	466.2	461.1	456.1	451.0
52.5°	469.6	455.4	441.3	432.0	427.4	422.9	418.4	413.9
55°	412.7	400.0	387.3	378.7	374.4	369.9	365.6	361.2
57.5°	356.9	344.9	332.9	325.0	321.3	317.5	313.8	310.1
60°	321.7	309.9	298.0	290.3	286.5	282.8	279.1	275.3
62.5°	286.8	275.7	264.6	257.0	253.1	249.2	245.3	241.4
65°	237.0	226.3	215.6	209.0	206.6	204.2	201.8	199.3
67.5°	189.6	181.6	173.5	168.2	165.7	163.1	160.5	157.9
70°	160.3	152.6	145.0	140.0	137.5	135.1	132.7	130.3
72.5°	133.9	127.6	121.4	117.7	116.7	115.7	114.7	113.7
75°	100.2	98.0	95.9	94.5	94.1	93.7	93.2	92.7
77.5°	75.6	74.4	73.2	72.4	72.0	71.5	71.1	70.7
80°	60.9	60.2	59.6	59.0	58.5	58.2	57.7	57.2
82.5°	46.7	46.0	45.3	45.0	44.9	44.8	44.7	44.6
85°	26.8	26.3	25.9	25.6	25.6	25.6	25.6	25.6
87.5°	12.7	12.6	12.5	12.4	12.3	12.2	12.1	11.9
90°	13.9	14.3	14.8	15.2	15.5	15.6	15.9	16.1
92.5°	15.3	16.0	16.8	17.2	17.4	17.5	17.7	17.8
95°	18.4	19.1	20.0	20.5	20.5	20.5	20.5	20.5
97.5°	19.2	20.2	21.1	21.7	21.8	21.9	22.1	22.1
100°	19.6	20.6	21.6	22.1	22.2	22.3	22.4	22.6
102.5°	29.4	26.5	23.6	22.1	22.3	22.6	22.8	23.0
105°	75.4	54.3	33.2	22.7	22.9	23.2	23.4	23.7
107.5°	184.7	169.3	153.7	138.1	122.1	106.1	90.2	74.3
110°	234.6	230.6	226.7	216.1	199.1	182.0	164.9	147.8



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CATALOG NUMBER: S123RDIP-S775D585U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	269.7	269.8	269.8	268.1	264.5	260.8	257.2	253.6
115°	310.9	312.2	313.4	314.1	314.6	315.2	315.7	316.1
117.5°	348.4	349.3	350.2	350.8	350.9	351.0	351.1	351.2
120°	372.9	373.8	374.8	375.2	375.2	375.2	375.2	375.2
122.5°	396.8	397.5	398.1	398.5	398.6	398.7	398.8	398.9
125°	430.6	430.7	431.0	431.3	431.5	431.8	432.0	432.3
127.5°	464.4	464.8	465.1	465.2	465.0	464.8	464.5	464.3
130°	484.7	485.2	485.7	485.9	485.6	485.4	485.1	484.9
132.5°	504.2	504.6	505.1	505.2	504.8	504.4	504.2	503.8
135°	533.5	533.9	534.1	534.1	533.9	533.5	533.1	532.7
137.5°	559.6	560.2	560.7	560.9	560.6	560.4	560.2	560.0
140°	576.2	576.6	577.1	577.2	577.0	576.7	576.6	576.3
142.5°	591.9	592.3	592.7	592.7	592.4	592.0	591.6	591.4
145°	613.9	614.1	614.3	614.4	614.4	614.4	614.4	614.4
147.5°	633.6	633.8	634.0	633.9	633.3	632.7	632.3	631.7
150°	645.5	645.8	646.0	646.0	645.6	645.3	644.9	644.6
152.5°	656.3	656.7	657.1	657.0	656.6	656.0	655.4	654.9
155°	671.0	671.7	672.2	672.1	671.5	670.7	670.1	669.3
157.5°	683.8	684.6	685.3	685.1	684.2	683.3	682.4	681.5
160°	691.2	691.8	692.6	692.5	691.7	690.9	690.0	689.2
162.5°	697.8	698.6	699.5	699.5	698.7	698.0	697.2	696.5
165°	706.7	707.7	708.6	708.7	707.8	707.0	706.2	705.3
167.5°	713.6	714.5	715.5	715.5	714.5	713.6	712.7	711.6
170°	717.5	718.4	719.3	719.3	718.4	717.5	716.5	715.5
172.5°	720.0	721.0	721.9	721.9	720.9	719.8	718.7	717.7
175°	723.1	724.0	724.8	724.7	723.8	722.8	721.9	720.9
177.5°	724.2	725.0	725.8	725.7	724.7	723.8	722.8	721.9
180°	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6

(END OF REPORT)