

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: P332317-935

Luminaire Tested: **S123RDIP-S775D805U935-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332317-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S775D805U935-4F0-1E-UDD-F4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5015.6 lumens  
Efficiency: N/A  
Efficacy: 109.3 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

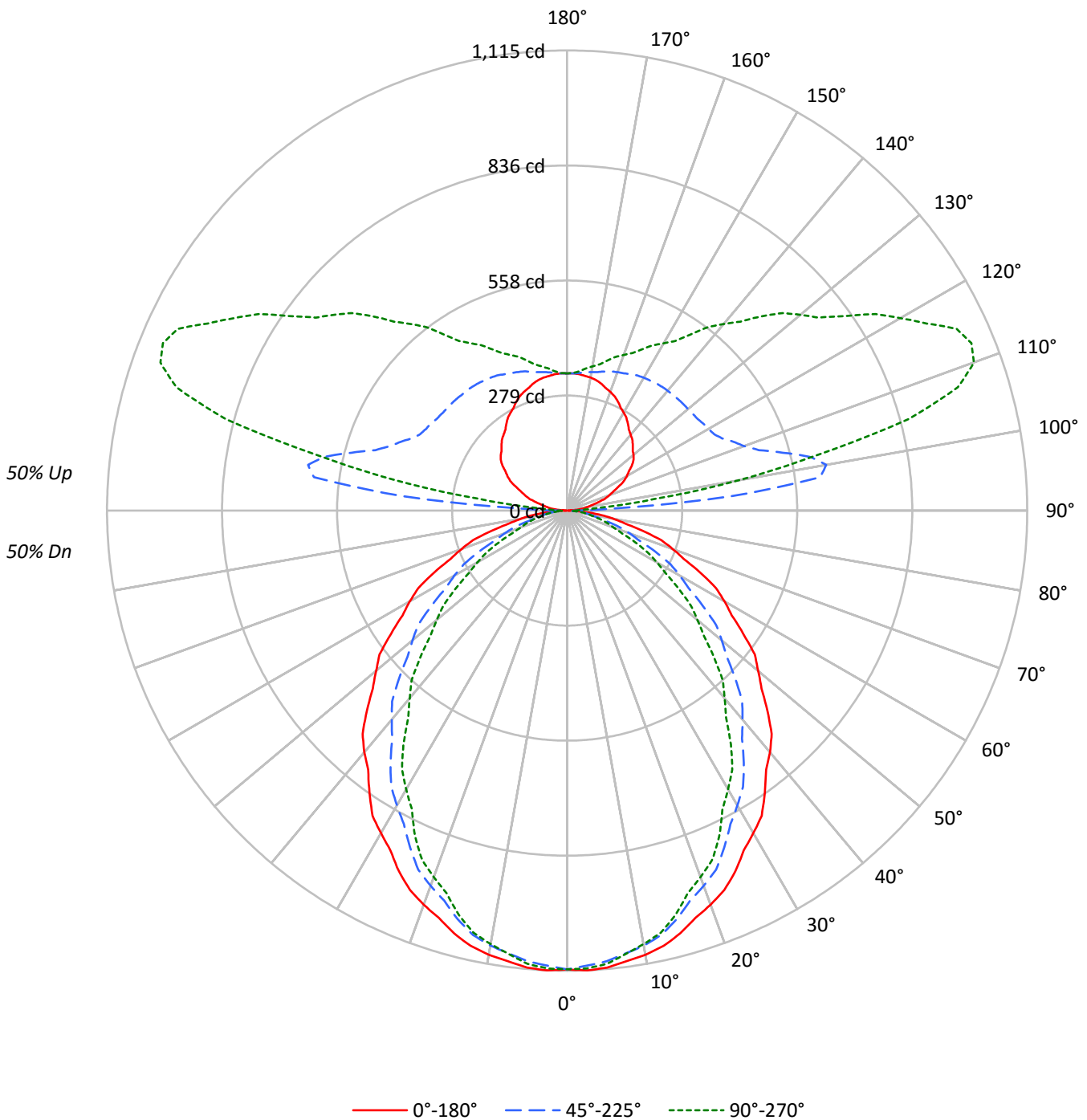
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56
1	98	94	90	87	90	87	84	81	74	71	69	61	60	58	50	49	48
2	90	82	76	71	82	76	71	67	65	61	58	54	52	49	45	43	41
3	82	73	66	60	75	67	61	56	57	53	49	48	45	42	40	37	35
4	75	65	57	51	69	60	53	48	51	46	42	43	39	36	36	33	31
5	69	58	50	44	64	54	47	41	46	41	36	39	35	32	32	29	27
6	64	52	44	38	59	48	41	36	42	36	32	35	31	28	29	26	24
7	59	47	39	34	54	44	37	32	38	32	28	32	28	25	27	24	21
8	55	43	35	30	51	40	33	28	34	29	25	29	25	22	25	22	19
9	51	39	32	27	47	36	30	25	32	26	23	27	23	20	23	20	17
10	48	36	29	24	44	34	27	23	29	24	20	25	21	18	21	18	16

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11965	11965	11965
5°	12011	11846	11914
10°	11943	11696	11657
15°	11814	11422	11303
20°	11639	11080	10822
25°	11457	10696	10354
30°	11216	10253	9692
35°	10970	9809	9087
40°	10742	9285	8335
45°	10443	8770	7658
50°	10114	8182	6899
55°	9779	7512	6191
60°	9472	6794	5414
65°	9070	6016	4638
70°	8567	5051	3745
75°	7835	3976	3523
80°	6986	3521	3242
85°	5903	3112	2890



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.4	2.1
10°-20°	290.4	5.8
20°-30°	418.2	8.3
30°-40°	471.1	9.4
40°-50°	450.7	9.0
50°-60°	369.0	7.4
60°-70°	249.0	5.0
70°-80°	125.3	2.5
80°-90°	35.7	0.7
90°-100°	185.1	3.7
100°-110°	524.0	10.4
110°-120°	515.5	10.3
120°-130°	411.2	8.2
130°-140°	324.2	6.5
140°-150°	242.0	4.8
150°-160°	168.6	3.4
160°-170°	99.1	2.0
170°-180°	32.2	0.6
0°-30°	813.0	16.2
0°-40°	1284.1	25.6
0°-60°	2103.8	41.9
0°-90°	2513.7	50.1
90°-120°	1224.6	24.4
90°-150°	2201.9	43.9
90°-180°	2502.0	49.9
0°-180°	5015.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1112	1112	1112	1112	1112	
5°	1112	1107	1096	1104	1103	105
15°	1060	1049	1025	1020	1014	299
25°	965	941	901	882	872	443
35°	835	801	746	709	692	522
45°	686	644	576	526	503	529
55°	521	475	400	350	330	467
65°	356	305	236	194	182	352
75°	188	145	96	87	85	201
85°	48	29	25	24	23	54
90°	1	8	17	19	20	4
95°	23	74	399	116	78	25
105°	78	115	541	946	856	83
115°	138	172	414	908	1041	137
125°	192	226	386	700	821	170
135°	225	268	381	576	666	174
145°	256	294	376	473	520	161
155°	291	314	364	414	431	134
165°	318	327	349	370	376	90
175°	332	332	335	339	339	32
180°	332	332	332	332	332	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6
2.5°	1115.2	1114.6	1113.9	1113.3	1112.7	1111.4	1109.4	1107.5	1105.6	1103.6	1105.4
5°	1111.6	1110.6	1109.6	1108.6	1107.6	1105.9	1103.5	1101.0	1098.6	1096.3	1098.0
7.5°	1101.3	1100.3	1099.2	1098.0	1097.0	1094.8	1091.7	1088.6	1085.5	1082.4	1083.4
10°	1092.7	1091.2	1089.9	1088.5	1087.0	1084.5	1080.9	1077.4	1073.8	1070.1	1070.3
12.5°	1080.4	1078.8	1077.3	1075.7	1074.2	1071.2	1066.8	1062.4	1057.9	1053.5	1053.4
15°	1060.2	1058.0	1055.8	1053.6	1051.4	1047.5	1041.9	1036.3	1030.6	1025.0	1024.1
17.5°	1034.7	1032.3	1029.7	1027.1	1024.5	1019.7	1012.5	1005.4	998.2	991.2	989.0
20°	1016.1	1012.8	1009.6	1006.4	1003.2	997.8	990.2	982.6	975.0	967.3	964.8
22.5°	995.1	991.4	987.7	984.0	980.3	974.5	966.4	958.3	950.2	942.1	938.8
25°	964.7	959.7	954.6	949.6	944.6	937.5	928.2	919.0	909.8	900.6	896.4
27.5°	927.6	922.1	916.6	911.1	905.6	897.7	887.4	877.2	866.9	856.6	850.8
30°	902.4	896.4	890.4	884.4	878.4	869.8	858.6	847.3	836.1	824.9	818.1
32.5°	877.2	870.4	863.6	856.8	850.0	840.6	828.7	816.9	805.0	793.2	785.7
35°	834.8	827.6	820.4	813.2	806.0	796.2	783.8	771.3	758.9	746.5	737.9
37.5°	791.9	783.9	775.8	767.8	759.8	749.2	736.0	722.7	709.5	696.2	686.4
40°	764.5	755.7	746.8	738.0	729.3	717.7	703.5	689.3	675.0	660.8	650.4
42.5°	733.5	724.7	715.8	707.1	698.3	686.5	671.8	657.0	642.4	627.7	616.3
45°	686.0	677.1	668.0	659.0	650.0	637.8	622.3	606.9	591.5	576.1	564.6
47.5°	638.7	628.8	618.9	609.0	599.1	586.4	571.0	555.5	540.1	524.7	512.3
50°	604.0	594.6	585.2	575.8	566.4	553.5	537.4	521.1	504.9	488.6	476.2
52.5°	573.0	562.8	552.6	542.3	532.2	519.0	502.9	486.9	470.8	454.7	441.9
55°	521.1	511.3	501.4	491.6	481.8	468.4	451.3	434.4	417.3	400.3	388.7
57.5°	473.1	462.4	451.8	441.0	430.3	416.5	399.3	382.2	365.1	348.0	337.0
60°	440.0	429.0	417.9	406.9	395.9	382.0	365.4	348.8	332.2	315.6	304.7
62.5°	406.7	395.7	384.7	373.7	362.7	348.9	332.3	315.6	299.0	282.3	272.2
65°	356.1	345.1	334.1	323.0	312.0	298.7	283.1	267.4	251.8	236.2	226.4
67.5°	305.5	294.3	283.2	272.0	260.9	247.8	232.8	217.8	202.9	187.9	180.6
70°	272.2	261.5	250.6	239.8	229.0	216.5	202.5	188.6	174.5	160.5	153.4
72.5°	239.1	228.4	217.7	207.1	196.5	184.8	172.0	159.3	146.5	133.8	128.0
75°	188.4	178.8	169.2	159.5	150.0	139.7	128.6	117.6	106.6	95.6	93.6
77.5°	142.2	133.5	124.8	116.1	107.5	99.6	92.5	85.4	78.4	71.2	70.2
80°	112.7	104.4	96.3	88.1	79.8	73.6	69.4	65.2	61.0	56.8	56.2
82.5°	84.6	77.5	70.3	63.3	56.2	51.7	49.7	47.7	45.8	43.8	43.2
85°	47.8	43.4	39.0	34.5	30.1	27.6	27.0	26.4	25.8	25.2	24.9
87.5°	17.6	16.1	14.6	13.3	11.7	11.1	11.5	12.0	12.3	12.7	12.5
90°	1.4	2.7	4.0	6.0	7.4	8.8	10.8	12.8	14.8	16.8	16.2
92.5°	8.4	12.4	18.1	23.3	28.9	38.9	56.6	85.5	113.9	103.5	78.1
95°	22.9	24.9	32.3	43.7	61.2	87.5	144.7	245.0	355.4	399.2	323.8
97.5°	39.0	39.7	45.5	55.4	72.7	101.1	155.8	268.9	452.9	618.6	661.9
100°	49.9	50.5	55.2	64.7	80.8	107.0	154.1	253.7	430.8	637.5	770.1
102.5°	61.1	62.3	66.5	75.4	90.0	114.0	156.3	240.8	398.5	602.4	775.5
105°	78.1	80.1	84.1	92.2	105.0	125.9	162.2	231.5	358.8	541.2	734.4
107.5°	96.1	98.2	102.0	109.9	122.0	141.4	173.2	230.9	333.5	487.1	662.5
110°	109.1	111.1	114.4	121.8	133.3	152.1	182.4	233.6	323.8	456.4	617.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	120.9	123.0	126.3	133.7	145.2	163.4	191.6	238.9	318.4	435.9	578.0
115°	138.0	140.7	144.7	151.4	162.9	181.1	206.6	247.7	316.4	414.0	530.5
117.5°	155.1	158.2	161.5	167.7	180.6	197.3	222.7	259.3	317.6	401.1	501.8
120°	166.9	168.9	172.3	179.1	191.8	208.7	232.9	267.9	319.8	395.1	486.7
122.5°	177.2	179.2	182.5	189.9	202.1	220.0	243.7	276.0	323.5	391.4	474.3
125°	191.8	193.2	197.3	204.7	217.4	235.6	259.2	288.8	329.2	386.4	458.4
127.5°	203.0	205.0	210.0	217.6	231.7	249.9	272.6	299.3	335.6	384.0	444.4
130°	210.0	212.1	218.1	226.2	240.3	258.5	280.7	306.3	339.9	382.4	436.9
132.5°	215.4	218.0	224.5	234.3	248.4	266.0	287.7	312.7	343.2	381.8	429.9
135°	224.8	227.6	235.0	245.0	259.2	277.3	298.2	321.1	348.0	381.0	420.7
137.5°	233.7	236.5	243.8	254.6	268.5	285.4	305.5	327.3	351.3	379.5	412.8
140°	239.6	243.0	249.8	260.5	274.0	290.8	310.3	330.5	353.4	379.0	407.9
142.5°	246.1	248.9	256.2	265.9	279.4	295.1	314.1	333.7	355.0	377.9	403.6
145°	256.5	258.5	264.6	274.7	286.1	301.6	319.1	337.3	356.1	376.3	397.9
147.5°	267.0	268.2	274.1	282.8	293.9	307.1	323.1	339.4	356.1	373.8	392.2
150°	274.0	274.7	280.0	288.8	298.2	310.3	325.8	339.9	356.1	371.6	388.4
152.5°	280.9	281.1	286.5	294.2	302.5	314.1	327.4	341.0	354.5	368.9	384.1
155°	291.4	291.4	295.5	302.2	309.6	319.1	330.5	341.3	352.8	364.2	377.6
157.5°	299.8	300.3	303.6	309.5	315.8	323.1	332.3	342.0	350.4	360.0	370.4
160°	306.3	306.3	309.0	314.4	319.1	325.8	333.9	342.0	349.4	356.8	365.5
162.5°	311.2	311.2	313.3	317.6	321.8	327.4	334.4	341.4	347.2	353.5	360.7
165°	318.4	317.7	319.1	322.4	325.1	329.8	335.2	339.9	344.0	348.7	354.0
167.5°	323.9	323.1	323.8	326.3	328.2	331.2	335.1	338.9	340.8	343.9	347.8
170°	327.2	325.8	326.5	328.5	329.8	331.2	334.6	337.3	338.6	340.6	344.0
172.5°	329.3	328.5	328.6	330.1	330.9	331.7	334.6	336.7	337.0	337.9	340.2
175°	331.8	331.2	330.5	331.8	331.8	332.5	333.9	335.2	334.6	334.6	335.9
177.5°	333.0	332.5	332.0	332.5	332.5	332.5	333.0	334.2	333.0	332.5	333.0
180°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6
2.5°	1107.2	1109.0	1110.7	1111.5	1111.1	1110.8	1110.4	1110.2
5°	1099.8	1101.6	1103.5	1104.1	1103.8	1103.4	1102.9	1102.6
7.5°	1084.4	1085.4	1086.4	1086.6	1085.9	1085.2	1084.5	1083.8
10°	1070.6	1070.7	1070.9	1070.6	1069.5	1068.5	1067.6	1066.5
12.5°	1053.3	1053.2	1053.1	1052.4	1051.3	1050.1	1049.0	1047.8
15°	1023.0	1022.0	1021.1	1019.9	1018.5	1017.0	1015.6	1014.3
17.5°	986.9	984.8	982.7	980.6	978.4	976.4	974.3	972.2
20°	962.2	959.5	956.9	954.4	952.0	949.6	947.2	944.8
22.5°	935.6	932.4	929.1	926.3	924.1	921.9	919.6	917.4
25°	892.3	888.0	883.8	880.6	878.4	876.2	874.0	871.8
27.5°	844.9	839.1	833.3	828.6	825.3	821.9	818.6	815.2
30°	811.3	804.4	797.6	792.6	789.5	786.3	783.0	779.8
32.5°	778.3	770.9	763.4	757.9	754.6	751.2	747.9	744.5
35°	729.3	720.7	712.0	705.9	702.3	698.7	695.1	691.5
37.5°	676.6	666.8	657.0	650.0	645.5	641.0	636.6	632.1
40°	640.0	629.6	619.1	611.7	607.0	602.4	597.8	593.2
42.5°	604.9	593.5	582.1	574.4	570.2	566.1	562.0	557.8
45°	553.3	541.8	530.4	522.3	517.5	512.6	507.9	503.1
47.5°	499.8	487.4	475.0	466.7	462.4	458.1	453.8	449.5
50°	463.8	451.3	438.9	430.4	425.9	421.2	416.6	412.0
52.5°	429.0	416.0	403.1	394.6	390.5	386.3	382.2	378.1
55°	377.0	365.4	353.8	345.9	342.0	337.9	334.0	329.9
57.5°	326.1	315.0	304.1	296.9	293.5	290.1	286.6	283.3
60°	293.9	283.1	272.2	265.2	261.7	258.3	254.9	251.5
62.5°	262.0	251.8	241.7	234.8	231.2	227.6	224.1	220.5
65°	216.5	206.7	196.9	190.9	188.7	186.5	184.3	182.1
67.5°	173.2	165.9	158.5	153.7	151.4	149.0	146.6	144.2
70°	146.5	139.4	132.4	127.9	125.6	123.4	121.2	119.0
72.5°	122.3	116.6	110.9	107.5	106.6	105.7	104.8	103.8
75°	91.5	89.5	87.6	86.4	85.9	85.6	85.2	84.7
77.5°	69.1	67.9	66.9	66.1	65.8	65.3	64.9	64.6
80°	55.6	55.0	54.4	53.9	53.5	53.1	52.7	52.3
82.5°	42.6	42.0	41.4	41.1	41.0	40.9	40.8	40.7
85°	24.5	24.0	23.7	23.4	23.4	23.4	23.4	23.4
87.5°	12.4	12.4	12.4	12.5	12.2	12.1	12.1	11.8
90°	16.8	17.5	18.2	19.5	18.9	19.5	20.2	19.5
92.5°	56.7	44.9	39.7	36.2	35.0	33.0	33.7	32.5
95°	242.4	164.3	128.5	104.4	91.5	85.5	80.8	78.1
97.5°	604.1	483.9	397.0	316.5	266.8	236.5	218.3	212.6
100°	793.7	739.1	660.4	564.7	496.8	447.6	421.4	422.1
102.5°	856.6	854.9	809.0	748.4	695.5	656.6	634.6	619.1
105°	875.1	942.4	955.2	937.7	906.7	881.1	859.6	856.3
107.5°	822.1	931.3	990.3	1014.3	1014.9	1006.3	998.9	992.7
110°	771.5	895.3	980.1	1027.3	1046.0	1051.5	1050.1	1048.8





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CATALOG NUMBER: S123RDIP-S775D805U935-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	721.3	847.9	943.0	1003.5	1038.0	1054.7	1059.8	1060.1
115°	655.0	772.1	871.1	944.4	994.9	1024.5	1038.0	1041.4
117.5°	606.9	708.0	796.9	871.3	923.9	957.9	977.2	981.9
120°	581.6	672.4	753.3	821.2	874.4	912.1	928.2	932.3
122.5°	561.7	643.9	718.8	782.0	829.1	863.1	880.9	886.0
125°	535.1	608.6	673.1	727.0	770.1	799.7	816.5	821.2
127.5°	512.0	577.4	635.8	684.8	723.1	748.4	763.6	767.9
130°	497.5	558.0	612.6	658.3	694.1	718.2	732.4	737.8
132.5°	484.0	539.8	590.5	634.1	667.6	691.9	704.4	708.2
135°	465.8	513.6	557.3	595.7	628.7	648.9	661.0	665.7
137.5°	449.3	488.4	526.2	559.4	587.1	607.6	617.9	621.0
140°	439.5	473.9	506.2	535.1	560.8	579.5	590.4	589.7
142.5°	430.4	459.9	487.9	513.1	534.9	551.6	561.3	560.6
145°	419.4	441.6	463.1	482.7	499.5	513.6	519.0	520.3
147.5°	410.4	428.0	445.4	459.3	472.0	481.6	486.7	487.2
150°	403.9	419.4	433.5	446.3	456.4	463.8	467.9	467.9
152.5°	398.0	411.3	423.8	434.5	442.4	449.3	451.7	451.7
155°	389.1	399.8	409.9	418.0	424.0	429.5	430.8	431.4
157.5°	379.6	388.7	396.5	402.8	408.0	412.1	413.2	413.0
160°	374.3	381.7	388.4	393.1	397.9	401.8	401.8	401.2
162.5°	367.8	374.1	380.3	384.5	387.6	391.1	391.1	390.5
165°	359.5	363.5	368.2	371.6	374.3	376.9	376.3	376.3
167.5°	352.1	355.2	358.0	360.4	361.6	363.5	362.8	362.8
170°	347.3	349.4	352.1	353.4	354.0	355.4	354.7	354.7
172.5°	343.0	344.5	346.6	347.5	347.6	349.0	347.8	347.2
175°	337.3	337.9	339.2	339.2	339.2	339.9	339.2	338.6
177.5°	333.6	334.2	334.7	334.7	334.2	334.7	333.6	333.6
180°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5

(END OF REPORT)