

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: P332311-830

Luminaire Tested: **S123RDIP-S775D585U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332311-830
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-S775D585U830-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4749.1 lumens
Efficiency: N/A
Efficacy: 117.8 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

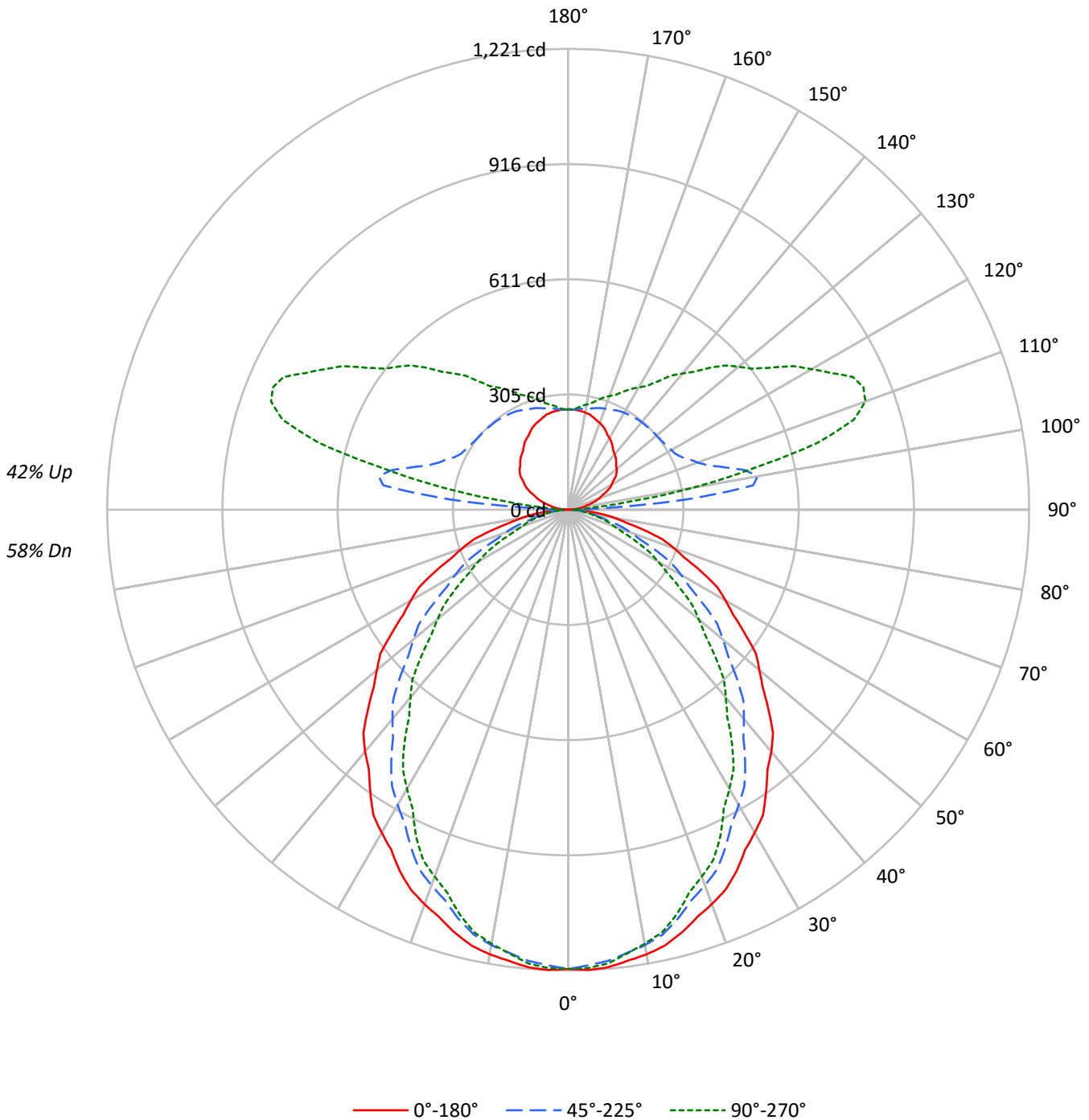
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63	58
1	100	96	92	88	93	89	86	83	78	75	73	67	65	63	57	55	54	50
2	91	84	78	73	85	79	73	69	68	64	61	59	56	53	50	48	46	42
3	84	74	67	61	78	69	63	58	61	56	52	52	49	46	45	42	40	36
4	77	66	58	52	71	62	55	49	54	49	44	47	43	39	40	37	35	31
5	70	59	51	45	66	55	48	43	49	43	39	42	38	34	37	33	30	27
6	65	53	45	39	61	50	43	37	44	38	34	38	34	30	33	30	27	24
7	60	48	40	35	56	45	38	33	40	34	30	35	30	27	30	27	24	22
8	56	44	36	31	52	41	34	29	37	31	27	32	28	24	28	24	22	19
9	52	40	33	28	49	38	31	26	34	28	24	30	25	22	26	22	20	18
10	49	37	30	25	46	35	28	24	31	26	22	27	23	20	24	21	18	16

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	2.4
10°-20°	317.9	6.7
20°-30°	457.8	9.6
30°-40°	515.7	10.9
40°-50°	493.3	10.4
50°-60°	404.0	8.5
60°-70°	272.6	5.7
70°-80°	137.1	2.9
80°-90°	38.3	0.8
90°-100°	147.8	3.1
100°-110°	418.5	8.8
110°-120°	411.7	8.7
120°-130°	328.4	6.9
130°-140°	258.9	5.5
140°-150°	193.2	4.1
150°-160°	134.7	2.8
160°-170°	79.1	1.7
170°-180°	25.7	0.5
0°-30°	890.0	18.7
0°-40°	1405.7	29.6
0°-60°	2303.0	48.5
0°-90°	2751.1	57.9
90°-120°	978.0	20.6
90°-150°	1758.5	37.0
90°-180°	1998.0	42.1
0°-180°	4749.1	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	14	15	16	4
95°	18	59	319	93	62	20
105°	62	92	432	756	684	66
115°	110	137	331	725	832	109
125°	153	181	309	559	656	136
135°	180	214	304	460	532	139
145°	205	235	300	378	416	128
155°	233	251	291	331	345	107
165°	254	262	278	295	300	72
175°	265	265	267	271	270	25
180°	266	266	266	266	266	



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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°	19.1	17.4	15.7	14.1	12.4	11.7	12.0	12.3	12.6	12.9	12.6
90°	1.0	2.2	3.2	4.8	5.9	7.0	8.6	10.2	11.8	13.5	12.9
92.5°	6.7	9.9	14.4	18.6	23.1	31.1	45.1	68.2	91.0	82.7	62.4
95°	18.3	19.9	25.8	35.0	48.9	69.8	115.6	195.7	283.9	318.8	258.5
97.5°	31.2	31.8	36.4	44.3	58.1	80.8	124.4	214.7	361.7	494.1	528.6
100°	39.8	40.3	44.1	51.7	64.5	85.5	123.1	202.6	344.0	509.1	615.0
102.5°	48.8	49.8	53.2	60.2	71.8	91.0	124.8	192.4	318.3	481.2	619.3
105°	62.4	64.0	67.2	73.6	83.9	100.6	129.6	184.9	286.5	432.3	586.5
107.5°	76.7	78.4	81.5	87.8	97.5	112.9	138.4	184.4	266.4	389.0	529.1
110°	87.1	88.7	91.4	97.3	106.4	121.5	145.7	186.5	258.5	364.5	492.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	96.5	98.2	100.9	106.8	115.9	130.5	153.0	190.9	254.3	348.2	461.6
115°	110.2	112.4	115.6	120.9	130.1	144.6	165.0	197.8	252.7	330.6	423.7
117.5°	123.9	126.3	129.0	133.9	144.2	157.6	177.9	207.1	253.6	320.3	400.8
120°	133.4	135.0	137.6	143.0	153.3	166.6	186.0	214.0	255.3	315.6	388.7
122.5°	141.5	143.1	145.8	151.6	161.4	175.7	194.6	220.5	258.4	312.5	378.8
125°	153.3	154.3	157.5	163.4	173.6	188.1	207.0	230.6	262.9	308.6	366.1
127.5°	162.1	163.7	167.8	173.7	185.0	199.5	217.7	239.0	268.1	306.6	355.0
130°	167.8	169.4	174.2	180.6	191.9	206.4	224.1	244.6	271.5	305.4	348.9
132.5°	172.0	174.1	179.4	187.1	198.4	212.4	229.8	249.8	274.1	304.9	343.3
135°	179.6	181.7	187.7	195.7	207.0	221.5	238.2	256.5	278.0	304.3	336.0
137.5°	186.6	188.9	194.7	203.3	214.5	227.9	243.9	261.4	280.5	303.1	329.7
140°	191.4	194.1	199.4	208.0	218.8	232.2	247.8	264.0	282.2	302.7	325.7
142.5°	196.5	198.8	204.6	212.4	223.1	235.7	250.8	266.6	283.5	301.8	322.3
145°	204.8	206.4	211.3	219.3	228.5	240.8	254.9	269.4	284.4	300.5	317.7
147.5°	213.2	214.1	219.0	225.9	234.7	245.2	258.1	271.1	284.4	298.5	313.2
150°	218.8	219.3	223.7	230.6	238.2	247.8	260.2	271.5	284.4	296.7	310.2
152.5°	224.4	224.5	228.8	235.0	241.6	250.8	261.5	272.4	283.1	294.6	306.8
155°	232.8	232.8	236.0	241.4	247.3	254.9	264.0	272.6	281.7	290.9	301.6
157.5°	239.4	239.9	242.4	247.2	252.2	258.1	265.3	273.1	279.8	287.5	295.8
160°	244.6	244.6	246.8	251.1	254.9	260.2	266.6	273.1	279.0	284.9	291.9
162.5°	248.5	248.5	250.2	253.6	256.9	261.5	267.1	272.7	277.3	282.4	288.0
165°	254.3	253.7	254.9	257.5	259.7	263.4	267.7	271.5	274.8	278.5	282.8
167.5°	258.7	258.1	258.5	260.6	262.1	264.5	267.6	270.6	272.1	274.6	277.8
170°	261.3	260.2	260.7	262.3	263.4	264.5	267.2	269.4	270.4	272.0	274.8
172.5°	263.0	262.3	262.5	263.6	264.3	264.9	267.2	268.9	269.1	269.8	271.7
175°	265.0	264.5	264.0	265.0	265.0	265.6	266.6	267.7	267.2	267.2	268.2
177.5°	266.0	265.6	265.1	265.6	265.6	265.6	266.0	266.8	266.0	265.6	266.0
180°	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6



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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°	12.6	12.5	12.4	12.5	12.3	12.2	12.1	11.8
90°	13.5	13.9	14.5	15.6	15.1	15.6	16.1	15.6
92.5°	45.2	35.9	31.8	28.9	28.0	26.3	26.9	25.9
95°	193.5	131.2	102.6	83.3	73.1	68.2	64.5	62.4
97.5°	482.5	386.4	317.1	252.8	213.1	188.9	174.4	169.8
100°	633.9	590.3	527.4	451.0	396.7	357.5	336.6	337.1
102.5°	684.2	682.8	646.1	597.7	555.4	524.3	506.8	494.5
105°	698.9	752.6	762.9	748.9	724.2	703.7	686.5	683.8
107.5°	656.5	743.9	790.9	810.0	810.5	803.6	797.8	792.9
110°	616.0	715.0	782.8	820.4	835.5	839.7	838.7	837.5



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CATALOG NUMBER: S123RDIP-S775D585U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	576.1	677.1	753.1	801.4	829.0	842.4	846.4	846.6
115°	523.1	616.6	695.7	754.2	794.6	818.2	829.0	831.7
117.5°	484.7	565.4	636.4	695.9	737.9	765.0	780.5	784.1
120°	464.5	537.1	601.5	655.9	698.3	728.5	741.3	744.6
122.5°	448.6	514.3	574.0	624.4	662.2	689.3	703.5	707.6
125°	427.3	486.0	537.6	580.6	615.0	638.7	652.1	655.9
127.5°	408.9	461.2	507.7	546.9	577.5	597.7	609.8	613.3
130°	397.3	445.6	489.2	525.8	554.3	573.6	584.9	589.2
132.5°	386.5	431.0	471.6	506.4	533.2	552.5	562.5	565.5
135°	372.0	410.2	445.2	475.8	502.1	518.2	527.9	531.7
137.5°	358.8	390.1	420.2	446.8	468.9	485.2	493.4	495.9
140°	351.1	378.4	404.3	427.3	447.8	462.9	471.5	470.9
142.5°	343.7	367.3	389.6	409.7	427.2	440.5	448.3	447.7
145°	334.9	352.7	369.9	385.5	398.9	410.2	414.5	415.6
147.5°	327.7	341.8	355.7	366.7	376.9	384.6	388.7	389.1
150°	322.5	334.9	346.2	356.5	364.5	370.4	373.6	373.6
152.5°	317.8	328.5	338.5	346.9	353.3	358.8	360.7	360.7
155°	310.8	319.3	327.4	333.8	338.7	343.0	344.0	344.6
157.5°	303.2	310.4	316.7	321.7	325.9	329.1	330.0	329.9
160°	298.9	304.8	310.2	314.0	317.7	320.9	320.9	320.4
162.5°	293.8	298.8	303.8	307.1	309.5	312.4	312.4	311.8
165°	287.1	290.3	294.1	296.7	298.9	301.0	300.5	300.5
167.5°	281.3	283.7	285.9	287.9	288.8	290.3	289.7	289.7
170°	277.4	279.0	281.2	282.2	282.8	283.9	283.3	283.3
172.5°	274.0	275.1	276.8	277.5	277.6	278.7	277.8	277.3
175°	269.4	269.8	271.0	271.0	271.0	271.5	271.0	270.4
177.5°	266.5	266.8	267.3	267.3	266.8	267.3	266.5	266.5
180°	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6

(END OF REPORT)