

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: P332942-935

Luminaire Tested: **S124RDIP-S795D810U935-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332942-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S795D810U935-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5257.5 lumens
Efficiency: N/A
Efficacy: 114.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

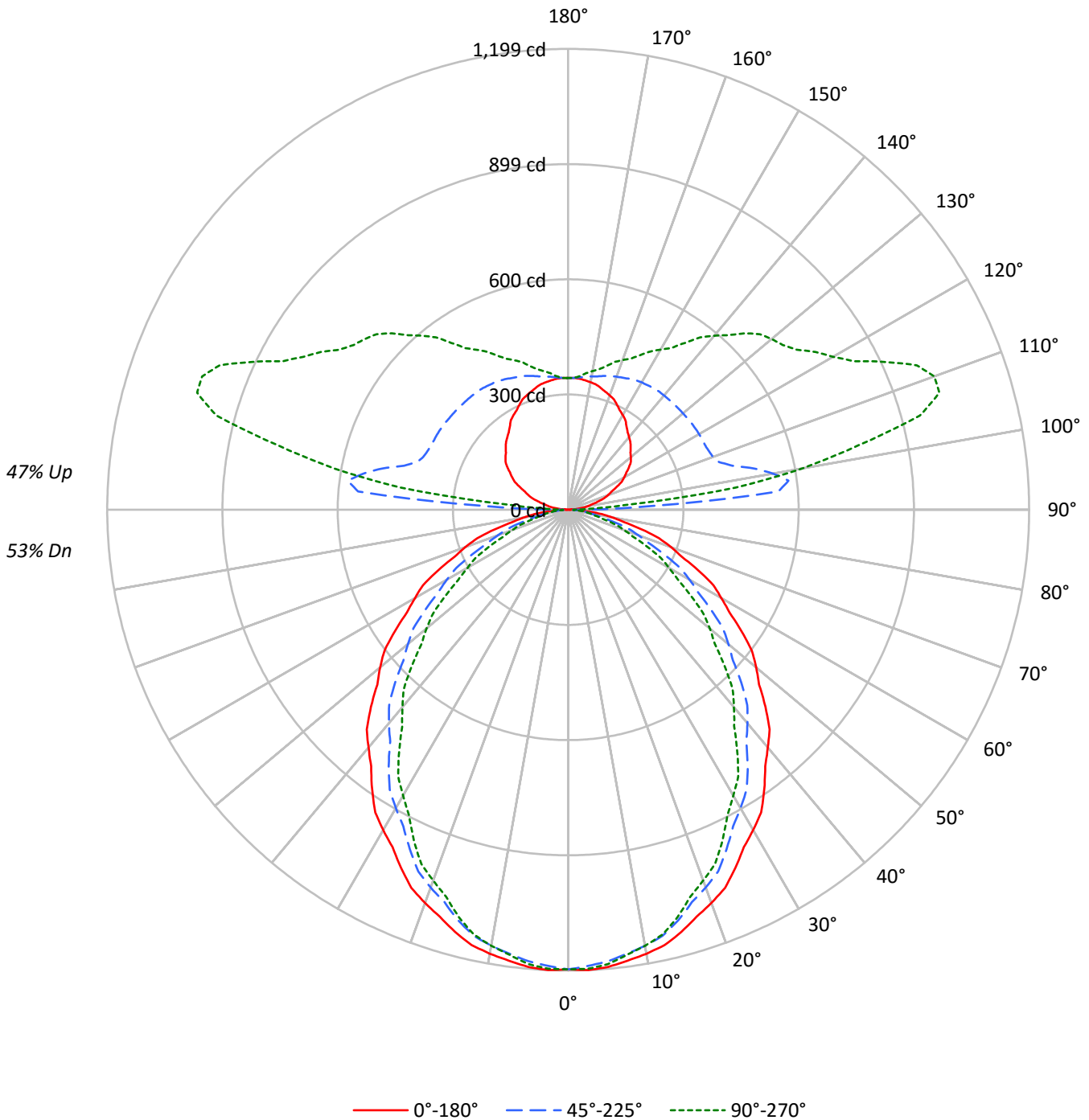
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	99	94	91	87	91	88	84	81	75	72	70	63	61	60	52	51	50	45
2	90	83	77	72	83	77	72	67	66	62	59	56	53	50	46	44	43	38
3	82	73	66	60	76	68	62	56	58	54	50	49	46	43	41	39	36	33
4	75	65	57	51	70	60	53	48	52	47	42	44	40	37	37	34	32	28
5	69	58	50	44	64	54	47	41	47	41	37	40	36	32	33	30	28	25
6	64	52	44	38	59	49	41	36	42	36	32	36	32	28	30	27	25	22
7	59	47	39	34	55	44	37	32	38	33	28	33	28	25	28	24	22	19
8	55	43	35	30	51	40	33	28	35	29	25	30	26	23	26	22	20	17
9	51	39	32	27	47	37	30	25	32	27	23	28	23	20	24	20	18	16
10	48	36	29	24	44	34	27	23	30	24	21	26	21	18	22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9656	9656	9656
5°	9678	9559	9618
10°	9617	9444	9444
15°	9507	9246	9177
20°	9355	8985	8820
25°	9161	8679	8459
30°	8972	8358	8007
35°	8763	8024	7554
40°	8513	7644	7065
45°	8281	7267	6566
50°	8017	6832	6038
55°	7734	6380	5465
60°	7424	5885	4879
65°	7138	5266	4304
70°	6722	4584	3654
75°	6198	3799	2969
80°	5407	2896	2724
85°	4576	2631	2455



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.4	2.1
10°-20°	313.3	6.0
20°-30°	452.4	8.6
30°-40°	512.8	9.8
40°-50°	495.2	9.4
50°-60°	411.8	7.8
60°-70°	284.4	5.4
70°-80°	144.1	2.7
80°-90°	38.9	0.7
90°-100°	247.5	4.7
100°-110°	515.1	9.8
110°-120°	461.4	8.8
120°-130°	388.1	7.4
130°-140°	323.6	6.2
140°-150°	247.2	4.7
150°-160°	173.8	3.3
160°-170°	102.2	1.9
170°-180°	33.3	0.6
0°-30°	878.1	16.7
0°-40°	1390.9	26.5
0°-60°	2297.9	43.7
0°-90°	2765.3	52.6
90°-120°	1224.0	23.3
90°-150°	2183.0	41.5
90°-180°	2492.0	47.4
0°-180°	5257.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1194	1190	1180	1188	1187	113
15°	1138	1128	1106	1104	1098	320
25°	1028	1011	974	959	950	474
35°	889	859	814	784	766	555
45°	725	690	636	593	575	559
55°	550	512	453	407	388	491
65°	374	333	276	238	225	369
75°	199	164	122	102	95	210
85°	49	32	28	27	26	56
90°	1	5	12	13	14	4
95°	22	70	549	272	164	25
105°	79	114	442	951	947	84
115°	139	174	394	757	910	138
125°	193	230	392	644	726	172
135°	230	273	388	572	649	177
145°	265	303	386	482	530	166
155°	301	325	376	426	444	139
165°	328	338	360	381	387	93
175°	342	343	345	350	349	32
180°	343	343	343	343	343	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1199.0	1198.3	1197.7	1197.0	1196.4	1195.2	1193.3	1191.6	1189.8	1188.0	1189.8
5°	1194.2	1193.4	1192.6	1191.8	1190.9	1189.4	1186.9	1184.5	1182.0	1179.6	1181.6
7.5°	1183.4	1182.6	1181.7	1180.9	1180.0	1178.0	1174.8	1171.6	1168.5	1165.3	1166.6
10°	1173.2	1172.2	1171.1	1170.1	1169.1	1166.7	1163.1	1159.4	1155.8	1152.1	1152.9
12.5°	1159.9	1158.8	1157.6	1156.4	1155.3	1152.5	1148.2	1143.8	1139.5	1135.2	1135.7
15°	1137.5	1135.7	1133.8	1132.0	1130.1	1126.7	1121.5	1116.5	1111.4	1106.3	1105.9
17.5°	1110.2	1107.5	1104.8	1102.3	1099.6	1095.2	1089.1	1083.0	1076.9	1070.7	1069.6
20°	1088.9	1086.2	1083.7	1081.0	1078.3	1073.6	1066.6	1059.7	1052.7	1045.9	1044.2
22.5°	1065.5	1062.5	1059.5	1056.5	1053.6	1048.4	1040.9	1033.5	1026.1	1018.7	1016.3
25°	1028.5	1024.8	1021.1	1017.4	1013.8	1007.8	999.4	991.1	982.7	974.4	970.9
27.5°	989.6	985.1	980.4	975.9	971.2	964.5	955.5	946.7	937.7	928.8	924.5
30°	962.5	957.4	952.4	947.3	942.2	934.9	925.3	915.8	906.1	896.6	891.5
32.5°	933.9	928.2	922.5	916.7	911.0	903.2	893.3	883.4	873.5	863.6	857.7
35°	889.2	882.8	876.2	869.7	863.2	854.9	844.7	834.5	824.3	814.2	807.3
37.5°	841.5	834.7	828.0	821.3	814.6	805.6	794.4	783.1	771.8	760.5	752.8
40°	807.8	801.1	794.4	787.6	780.9	771.7	760.1	748.6	736.9	725.3	716.8
42.5°	775.5	768.4	761.5	754.4	747.3	737.8	725.7	713.6	701.5	689.4	680.7
45°	725.3	717.8	710.2	702.7	695.2	685.4	673.1	660.9	648.7	636.5	626.5
47.5°	673.5	665.7	658.0	650.1	642.4	632.1	619.5	606.7	594.1	581.3	571.0
50°	638.3	630.4	622.4	614.5	606.6	596.1	583.1	570.1	557.0	544.0	533.8
52.5°	602.4	594.7	586.9	579.1	571.4	560.8	547.4	534.1	520.7	507.4	497.1
55°	549.5	541.3	533.2	525.0	516.9	506.3	493.0	479.7	466.6	453.3	442.7
57.5°	497.1	488.6	480.2	471.7	463.2	452.5	439.5	426.5	413.5	400.4	389.7
60°	459.8	451.6	443.5	435.3	427.1	416.6	403.6	390.5	377.5	364.5	353.9
62.5°	426.0	417.6	409.1	400.6	392.2	381.3	367.9	354.6	341.2	327.9	318.1
65°	373.7	364.9	356.1	347.4	338.6	327.8	314.7	301.7	288.7	275.7	266.9
67.5°	319.3	310.9	302.5	294.1	285.7	275.5	263.4	251.3	239.2	227.1	219.6
70°	284.8	276.3	267.7	259.2	250.6	240.6	228.9	217.3	205.8	194.2	187.4
72.5°	248.2	240.5	232.7	225.0	217.2	207.9	197.0	186.0	175.0	164.1	158.3
75°	198.7	191.2	183.7	176.2	168.6	160.1	150.5	140.9	131.4	121.8	117.1
77.5°	148.5	142.2	135.8	129.4	123.0	115.9	108.2	100.5	92.7	85.0	82.2
80°	116.3	110.4	104.5	98.6	92.7	86.7	80.6	74.5	68.4	62.3	61.6
82.5°	88.5	83.1	77.7	72.2	66.8	62.3	58.9	55.4	51.8	48.4	47.9
85°	49.4	45.4	41.3	37.3	33.1	30.8	30.2	29.6	29.0	28.4	28.0
87.5°	17.0	15.9	15.1	13.9	12.7	12.0	12.7	12.5	12.6	12.7	12.4
90°	0.7	2.0	4.0	4.7	5.4	5.4	9.4	9.4	10.8	12.1	11.5
92.5°	7.7	11.2	17.5	25.7	35.6	49.5	83.8	136.0	186.9	213.5	177.9
95°	22.2	24.2	31.0	39.7	55.9	84.1	142.8	253.1	414.1	548.7	564.2
97.5°	39.9	39.9	45.6	53.7	67.6	91.3	136.4	227.6	387.5	577.9	708.8
100°	51.1	51.1	55.9	64.0	76.7	98.3	138.0	214.1	351.5	541.3	713.6
102.5°	61.9	63.0	67.2	74.7	87.0	107.5	143.4	210.3	327.2	495.5	673.2
105°	78.8	80.8	84.1	92.2	104.4	123.9	156.2	212.1	306.3	441.6	599.9
107.5°	97.4	98.7	102.0	110.6	122.3	141.5	171.2	222.1	302.6	411.5	540.6
110°	109.8	111.1	114.4	122.5	134.7	152.8	182.4	229.5	303.6	401.2	511.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	121.6	123.0	126.8	134.4	146.5	164.7	193.2	237.6	306.9	396.4	494.3
115°	138.7	140.7	145.4	152.1	165.0	183.1	210.1	250.5	313.1	393.8	478.6
117.5°	156.4	158.3	162.6	170.0	181.9	200.8	226.4	263.5	319.7	393.1	471.7
120°	168.3	169.6	174.4	181.8	193.2	212.1	237.6	272.7	324.5	393.1	467.9
122.5°	179.1	180.5	185.1	192.0	204.5	222.8	248.4	281.3	329.3	392.6	463.6
125°	193.2	195.9	199.9	207.3	220.2	239.0	263.2	294.2	336.7	391.8	456.4
127.5°	205.8	207.9	212.8	221.2	234.5	253.6	277.0	305.4	342.4	390.4	446.9
130°	212.8	215.4	220.8	230.9	243.7	263.2	286.1	312.4	346.7	389.8	441.0
132.5°	219.7	221.9	228.9	238.5	252.4	270.8	293.7	319.3	350.5	389.3	435.6
135°	229.5	232.3	239.0	250.5	264.6	282.1	304.3	328.6	356.1	388.5	427.5
137.5°	239.4	241.9	249.3	260.3	274.9	291.6	312.4	335.0	359.5	388.3	420.5
140°	246.4	248.4	255.8	267.3	281.4	297.6	317.8	339.3	362.2	387.8	416.7
142.5°	253.9	256.0	262.9	273.7	287.3	303.0	322.6	342.5	364.4	387.8	413.5
145°	264.6	266.6	273.4	282.8	295.6	310.4	327.9	346.0	365.6	386.4	407.9
147.5°	276.6	277.2	283.2	292.8	303.5	316.8	333.3	349.1	366.3	384.0	403.0
150°	284.1	284.8	290.2	298.3	308.3	321.2	336.0	350.8	366.3	382.4	399.2
152.5°	291.1	291.3	296.6	304.2	313.2	324.9	338.1	351.8	365.2	379.7	394.9
155°	300.9	301.6	305.7	312.4	319.8	329.8	341.3	352.8	363.5	375.7	388.5
157.5°	310.5	310.5	314.3	319.5	326.0	333.9	343.6	352.8	361.8	371.5	381.9
160°	316.4	316.4	319.1	323.8	329.2	336.7	344.7	352.8	360.2	368.2	377.0
162.5°	321.8	321.2	323.4	327.6	332.4	338.2	345.8	352.8	358.6	365.1	372.7
165°	327.9	327.9	329.2	332.6	336.0	340.0	346.0	351.5	355.5	360.2	365.6
167.5°	333.9	333.3	333.9	336.5	338.4	341.5	345.9	349.8	352.2	355.3	359.1
170°	336.7	336.0	336.7	338.6	340.0	342.0	345.3	348.7	350.1	352.1	354.8
172.5°	339.3	338.6	338.8	340.3	341.0	342.5	344.8	347.7	347.9	348.9	351.0
175°	342.0	341.3	341.3	342.0	342.7	342.7	344.1	346.0	345.3	345.3	346.7
177.5°	343.2	342.7	342.2	342.7	342.7	342.7	343.2	344.3	343.2	343.2	343.7
180°	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1191.6	1193.3	1195.2	1196.0	1195.8	1195.7	1195.5	1195.3
5°	1183.6	1185.7	1187.7	1188.5	1188.1	1187.7	1187.3	1186.9
7.5°	1167.9	1169.2	1170.5	1170.8	1170.2	1169.5	1168.9	1168.2
10°	1153.7	1154.5	1155.4	1155.4	1154.5	1153.7	1152.9	1152.1
12.5°	1136.3	1136.7	1137.2	1136.9	1135.7	1134.6	1133.4	1132.3
15°	1105.5	1105.1	1104.7	1103.8	1102.3	1100.9	1099.5	1098.0
17.5°	1068.5	1067.4	1066.2	1064.5	1062.4	1060.2	1058.1	1055.9
20°	1042.6	1040.9	1039.3	1037.2	1034.6	1031.9	1029.2	1026.7
22.5°	1013.9	1011.4	1009.0	1006.7	1004.5	1002.4	1000.2	998.1
25°	967.5	964.1	960.6	957.9	955.8	953.8	951.7	949.7
27.5°	920.2	916.0	911.7	908.1	905.2	902.2	899.3	896.4
30°	886.4	881.3	876.2	872.0	868.8	865.6	862.3	859.0
32.5°	851.8	845.9	840.0	835.5	832.4	829.3	826.2	823.1
35°	800.3	793.4	786.5	781.2	777.6	773.9	770.2	766.5
37.5°	745.0	737.3	729.5	723.8	720.2	716.5	712.9	709.2
40°	708.3	699.6	691.1	685.0	681.4	677.7	674.1	670.4
42.5°	672.0	663.3	654.6	648.3	644.5	640.7	636.9	633.0
45°	616.6	606.6	596.6	589.8	586.1	582.5	578.8	575.1
47.5°	560.7	550.4	540.0	532.8	528.8	524.8	520.7	516.7
50°	523.7	513.5	503.3	496.3	492.4	488.5	484.7	480.8
52.5°	486.7	476.4	466.0	458.8	454.8	450.7	446.8	442.7
55°	432.1	421.5	411.0	403.8	399.9	396.1	392.2	388.3
57.5°	378.9	368.2	357.4	350.6	347.7	344.7	341.8	338.9
60°	343.4	332.8	322.2	315.2	312.0	308.8	305.5	302.2
62.5°	308.3	298.6	288.8	282.6	280.0	277.4	274.7	272.2
65°	258.1	249.4	240.6	235.1	232.6	230.1	227.7	225.3
67.5°	212.1	204.6	197.0	191.9	189.2	186.5	183.8	181.2
70°	180.7	174.0	167.3	162.9	160.9	158.9	156.8	154.8
72.5°	152.7	146.9	141.1	137.3	135.5	133.6	131.7	129.8
75°	112.4	107.8	103.1	100.1	98.9	97.7	96.4	95.2
77.5°	79.6	76.8	74.0	72.5	72.2	71.8	71.5	71.0
80°	61.0	60.4	59.8	59.4	59.2	59.0	58.8	58.6
82.5°	47.4	47.0	46.6	46.2	46.1	45.8	45.6	45.5
85°	27.6	27.2	26.8	26.5	26.5	26.5	26.5	26.5
87.5°	12.3	12.3	12.3	12.3	12.6	12.9	12.9	13.1
90°	12.1	12.8	13.4	13.4	14.1	14.8	14.1	14.1
92.5°	132.2	99.5	79.2	65.7	57.8	54.2	51.8	51.8
95°	498.9	394.5	304.3	239.0	206.0	185.1	173.1	164.3
97.5°	737.0	698.3	632.4	562.1	513.8	473.3	453.1	439.1
100°	811.9	825.4	792.4	742.6	684.0	642.9	622.8	617.3
102.5°	808.1	874.9	884.5	863.8	827.9	798.1	776.8	772.5
105°	754.1	870.5	937.1	964.8	966.1	960.7	951.3	947.3
107.5°	677.2	801.2	895.0	955.0	988.3	1003.7	1010.4	1012.1
110°	630.9	747.3	844.9	918.9	966.7	995.1	1007.2	1013.2



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CATALOG NUMBER: S124RDIP-S795D810U935-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	596.9	699.9	792.1	866.2	920.4	954.7	971.6	981.5
115°	562.8	645.7	724.4	789.0	842.2	882.6	904.1	909.6
117.5°	546.1	614.7	676.6	731.4	776.8	810.7	832.5	836.7
120°	538.6	601.2	655.0	702.8	741.2	770.9	788.3	795.7
122.5°	532.1	592.5	641.6	683.5	715.9	741.2	756.0	763.4
125°	521.1	579.0	625.4	662.5	689.4	708.9	721.7	725.7
127.5°	507.6	562.9	609.2	644.5	671.5	688.9	699.6	703.7
130°	496.9	550.0	595.8	631.5	659.1	676.0	686.7	690.8
132.5°	485.5	535.5	580.2	615.9	642.9	661.9	672.2	676.2
135°	469.9	513.7	554.7	588.4	615.4	634.2	645.0	649.0
137.5°	455.8	492.8	527.4	557.8	583.0	601.6	610.4	615.4
140°	447.7	479.3	509.6	538.0	561.5	576.3	585.7	591.1
142.5°	440.1	468.0	494.0	518.5	539.4	553.1	561.5	565.2
145°	429.6	452.5	472.6	491.5	508.3	519.7	526.5	529.9
147.5°	420.8	438.9	455.1	469.9	482.3	492.1	497.2	498.4
150°	415.3	430.8	444.4	456.4	467.3	476.0	480.0	480.7
152.5°	409.5	422.8	435.1	445.1	454.3	461.4	463.8	464.5
155°	400.5	411.4	421.5	429.6	436.3	441.6	443.7	443.7
157.5°	391.0	400.0	408.5	415.0	420.1	424.1	425.3	425.3
160°	385.1	392.5	399.9	405.3	409.3	413.4	414.1	414.1
162.5°	379.2	385.5	391.3	396.1	399.1	403.1	403.8	403.3
165°	370.9	375.0	379.7	383.1	385.7	388.5	387.8	387.1
167.5°	363.0	366.1	369.9	371.9	373.2	375.0	374.9	374.3
170°	358.2	360.2	362.9	364.9	366.3	366.9	366.3	366.3
172.5°	353.9	355.3	357.0	358.4	359.2	359.9	359.2	358.2
175°	348.1	348.7	350.1	350.1	350.1	351.5	350.1	348.7
177.5°	344.3	344.8	344.8	345.3	344.8	345.3	344.3	343.2
180°	342.7	342.7	342.7	342.7	342.7	342.7	342.7	342.7

(END OF REPORT)