

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: P332940-935

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332940-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
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-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 810 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5550.2 lumens  
Efficiency: N/A  
Efficacy: 120.9 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

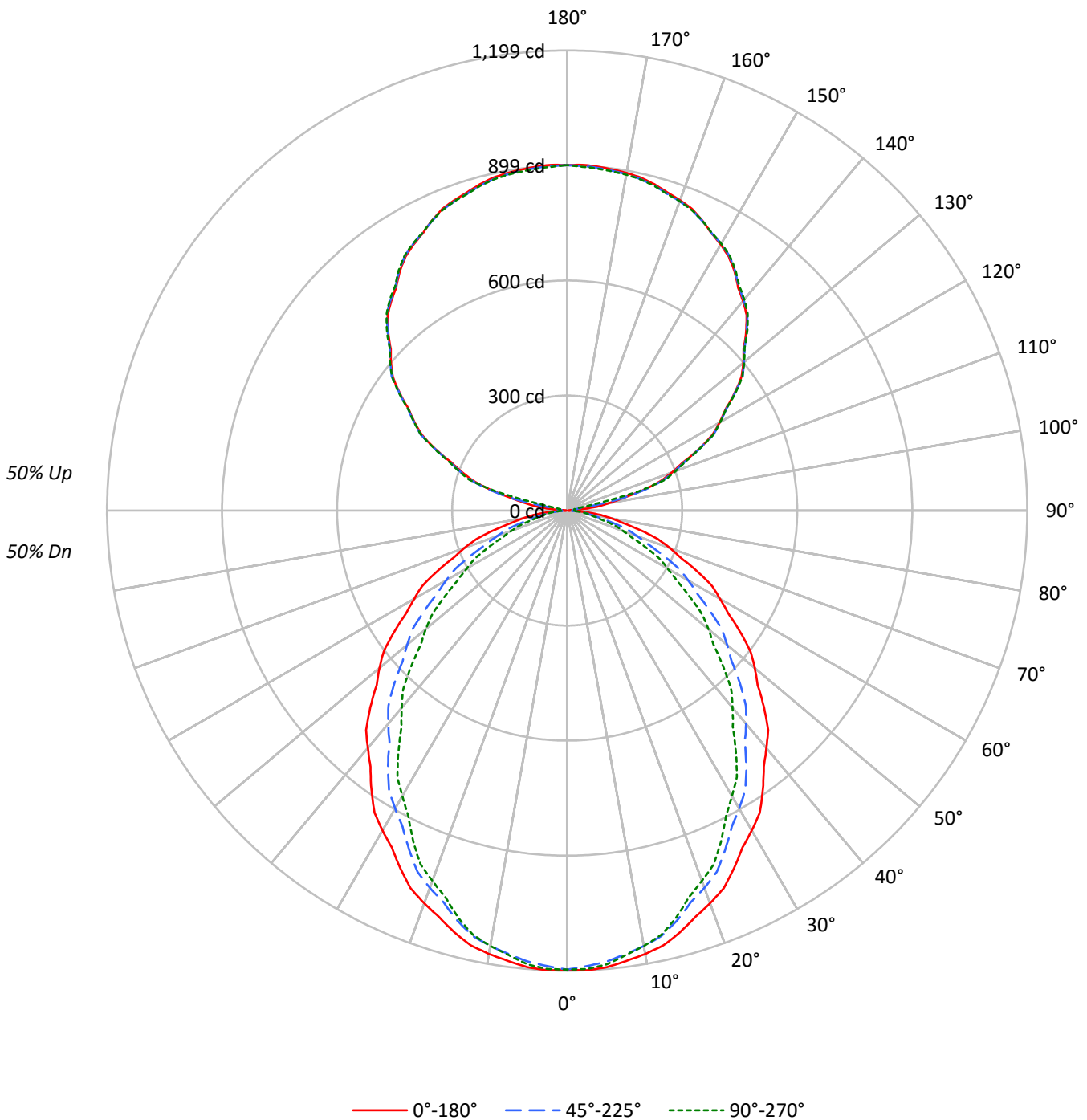
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	98	94	90	87	90	87	83	81	73	71	69	61	60	58	50	49	48	43
2	89	82	76	71	82	76	71	66	65	61	57	54	51	49	44	42	41	36
3	82	72	65	60	75	67	61	56	57	52	49	48	45	42	39	37	35	31
4	75	64	57	51	69	60	53	48	51	46	42	43	39	36	35	33	30	27
5	69	57	49	43	63	53	46	41	46	40	36	39	34	31	32	29	26	23
6	63	52	44	38	58	48	41	36	41	36	32	35	31	27	29	26	23	21
7	59	47	39	33	54	43	36	31	37	32	28	32	28	24	27	23	21	18
8	55	42	35	29	50	40	33	28	34	29	25	29	25	22	24	21	19	16
9	51	39	31	26	47	36	30	25	31	26	22	27	23	20	23	19	17	15
10	47	36	28	24	44	33	27	22	29	24	20	25	21	18	21	18	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	2.0
10°-20°	313.3	5.6
20°-30°	452.4	8.2
30°-40°	512.8	9.2
40°-50°	495.2	8.9
50°-60°	411.8	7.4
60°-70°	284.4	5.1
70°-80°	144.1	2.6
80°-90°	39.6	0.7
90°-100°	30.8	0.6
100°-110°	196.3	3.5
110°-120°	375.5	6.8
120°-130°	476.7	8.6
130°-140°	510.0	9.2
140°-150°	476.9	8.6
150°-160°	384.6	6.9
160°-170°	248.0	4.5
170°-180°	85.5	1.5
0°-30°	878.1	15.8
0°-40°	1390.9	25.1
0°-60°	2297.9	41.4
0°-90°	2766.0	49.8
90°-120°	602.6	10.9
90°-150°	2066.1	37.2
90°-180°	2784.0	50.2
0°-180°	5550.2	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°	2	9	15	19	20	4
95°	37	15	15	19	20	48
105°	203	207	210	214	192	212
115°	378	380	380	381	381	372
125°	532	534	533	535	536	475
135°	660	659	662	663	664	508
145°	761	763	763	763	765	475
155°	834	835	833	835	833	384
165°	880	877	876	881	876	249
175°	900	896	897	902	895	86
180°	900	900	900	900	900	



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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°	17.2	16.3	15.3	14.3	13.3	12.9	13.0	13.1	13.2	13.3	13.3
90°	2.0	3.7	5.3	7.0	8.6	10.0	11.2	12.4	13.6	14.8	15.7
92.5°	8.5	8.6	8.7	8.8	8.9	9.5	10.7	11.9	13.1	14.3	15.2
95°	37.0	31.9	26.9	21.8	16.7	14.2	14.4	14.6	14.6	14.8	15.7
97.5°	78.6	81.8	85.0	88.2	91.4	84.6	67.8	51.1	34.4	17.7	17.8
100°	110.4	113.1	115.8	118.5	121.1	112.2	91.5	70.9	50.3	29.6	27.0
102.5°	145.9	147.9	149.9	151.9	153.9	153.5	150.8	148.1	145.4	142.8	115.3
105°	202.6	203.5	204.4	205.3	206.2	207.1	207.8	208.5	209.3	210.0	211.4
107.5°	255.3	255.7	256.1	256.7	257.1	257.8	258.8	259.8	260.9	261.9	262.5
110°	290.8	291.3	291.7	292.1	292.7	293.3	294.2	295.1	296.0	296.9	297.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	325.3	326.1	326.9	327.7	328.6	329.2	329.6	329.9	330.4	330.8	330.8
115°	378.3	378.8	379.3	379.7	380.1	380.3	380.1	380.0	379.9	379.7	380.0
117.5°	426.1	426.7	427.3	427.9	428.5	429.0	429.3	429.6	430.0	430.3	430.2
120°	458.5	459.1	459.7	460.3	460.8	461.1	460.9	460.8	460.6	460.5	460.8
122.5°	488.6	489.0	489.3	489.7	490.1	490.3	490.5	490.8	490.9	491.2	491.4
125°	531.8	532.4	533.0	533.6	534.3	534.3	534.1	533.8	533.5	533.2	533.6
127.5°	572.7	572.9	573.1	573.3	573.3	573.8	574.5	575.1	575.8	576.5	576.4
130°	599.2	599.3	599.4	599.6	599.8	600.0	600.5	601.0	601.4	601.8	602.0
132.5°	623.4	623.6	624.0	624.2	624.5	624.9	625.4	626.0	626.5	627.2	627.3
135°	659.8	659.6	659.4	659.3	659.2	659.4	660.0	660.6	661.2	661.8	662.0
137.5°	691.9	692.0	692.1	692.1	692.2	692.5	693.2	693.9	694.5	695.2	695.5
140°	712.9	713.3	713.5	713.9	714.1	714.5	714.7	715.1	715.3	715.6	716.1
142.5°	731.8	732.3	732.9	733.4	733.9	734.3	734.4	734.7	734.9	735.0	735.4
145°	760.7	761.2	761.6	762.1	762.5	762.8	762.8	762.8	762.8	762.8	762.9
147.5°	783.8	784.6	785.4	786.3	787.1	787.5	787.3	787.1	787.0	786.9	787.0
150°	800.5	801.1	801.7	802.3	802.8	803.1	802.9	802.8	802.6	802.5	802.5
152.5°	814.4	814.9	815.4	815.9	816.4	816.5	816.2	816.0	815.6	815.4	815.6
155°	834.1	834.2	834.4	834.6	834.7	834.6	834.1	833.6	833.2	832.8	833.4
157.5°	850.7	850.6	850.5	850.4	850.3	850.0	849.5	849.0	848.5	848.0	848.8
160°	860.4	859.9	859.5	859.0	858.6	858.2	858.2	858.0	857.8	857.6	858.6
162.5°	869.0	868.4	867.8	867.3	866.7	866.3	866.2	866.1	865.9	865.7	866.7
165°	879.9	879.2	878.4	877.6	876.9	876.5	876.5	876.5	876.5	876.5	877.7
167.5°	888.5	887.7	886.9	886.1	885.4	884.9	884.8	884.8	884.7	884.6	885.9
170°	893.4	892.4	891.6	890.6	889.8	889.4	889.5	889.7	889.8	890.0	891.1
172.5°	896.6	895.7	894.8	893.9	893.0	892.6	892.8	892.9	893.0	893.2	894.4
175°	900.1	899.1	898.3	897.4	896.5	896.1	896.3	896.4	896.6	896.7	898.0
177.5°	901.7	900.9	900.0	899.1	898.4	898.0	898.3	898.5	898.8	899.0	899.9
180°	900.1	900.1	900.1	900.1	900.1	900.1	900.1	900.1	900.1	900.1	900.1



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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°	13.3	13.3	13.3	13.4	13.6	13.9	14.0	14.3
90°	16.6	17.5	18.4	19.0	19.3	19.6	19.9	20.2
92.5°	16.1	17.0	17.8	18.3	18.4	18.4	18.5	18.6
95°	16.6	17.5	18.4	18.9	19.1	19.2	19.4	19.5
97.5°	18.0	18.1	18.2	18.3	18.4	18.5	18.7	18.9
100°	24.5	22.0	19.5	18.3	18.4	18.5	18.7	18.9
102.5°	87.8	60.4	33.0	19.3	19.3	19.3	19.4	19.4
105°	212.8	214.0	215.4	213.4	208.0	202.6	197.3	191.8
107.5°	263.2	263.8	264.5	265.1	265.7	266.2	266.8	267.4
110°	297.5	297.8	298.1	298.4	298.9	299.4	299.8	300.2





TEST NUMBER: P332940-935

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

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	330.7	330.6	330.5	330.8	331.4	332.0	332.5	333.1
115°	380.3	380.6	380.9	381.1	381.1	381.1	381.1	381.1
117.5°	430.2	430.2	430.1	430.0	430.0	429.9	429.8	429.8
120°	461.1	461.4	461.7	461.7	461.4	461.1	460.8	460.5
122.5°	491.5	491.7	491.9	491.8	491.5	491.2	490.9	490.6
125°	534.1	534.5	534.9	535.3	535.5	535.5	535.7	535.9
127.5°	576.4	576.3	576.2	576.1	575.9	575.8	575.8	575.6
130°	602.2	602.3	602.4	602.5	602.5	602.5	602.5	602.5
132.5°	627.5	627.6	627.8	627.8	627.7	627.5	627.4	627.3
135°	662.4	662.6	663.0	663.2	663.6	663.8	664.2	664.4
137.5°	695.8	696.1	696.5	696.5	696.5	696.4	696.3	696.2
140°	716.5	717.0	717.4	717.7	717.9	718.0	718.2	718.3
142.5°	735.6	736.0	736.3	736.5	736.5	736.6	736.6	736.6
145°	763.0	763.2	763.4	763.5	763.9	764.1	764.5	764.7
147.5°	787.1	787.2	787.3	787.5	787.6	787.7	787.9	788.1
150°	802.5	802.5	802.5	802.5	802.7	802.8	803.0	803.1
152.5°	815.9	816.1	816.3	816.4	816.3	816.2	816.1	816.1
155°	834.0	834.6	835.2	835.3	834.7	834.3	833.9	833.4
157.5°	849.5	850.3	851.1	851.1	850.3	849.5	848.8	848.0
160°	859.5	860.4	861.3	861.3	860.4	859.5	858.6	857.6
162.5°	867.5	868.4	869.4	869.3	868.2	867.2	866.3	865.2
165°	878.9	880.1	881.3	881.2	879.9	878.6	877.2	875.8
167.5°	887.3	888.6	889.8	889.8	888.3	886.7	885.3	883.8
170°	892.3	893.5	894.8	894.6	893.1	891.7	890.1	888.6
172.5°	895.6	896.8	898.0	897.8	896.2	894.6	892.9	891.3
175°	899.4	900.8	902.1	901.9	900.1	898.3	896.5	894.7
177.5°	901.0	901.9	902.8	902.6	901.1	899.7	898.3	896.8
180°	900.1	900.1	900.1	900.1	900.1	900.1	900.1	900.1

(END OF REPORT)