

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: P333058

Luminaire Tested: **S124RDIW-S795D470U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333058  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDIW-S795D470U835-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 470 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4836.8 lumens  
Efficiency: N/A  
Efficacy: 128.3 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: Semi-Direct

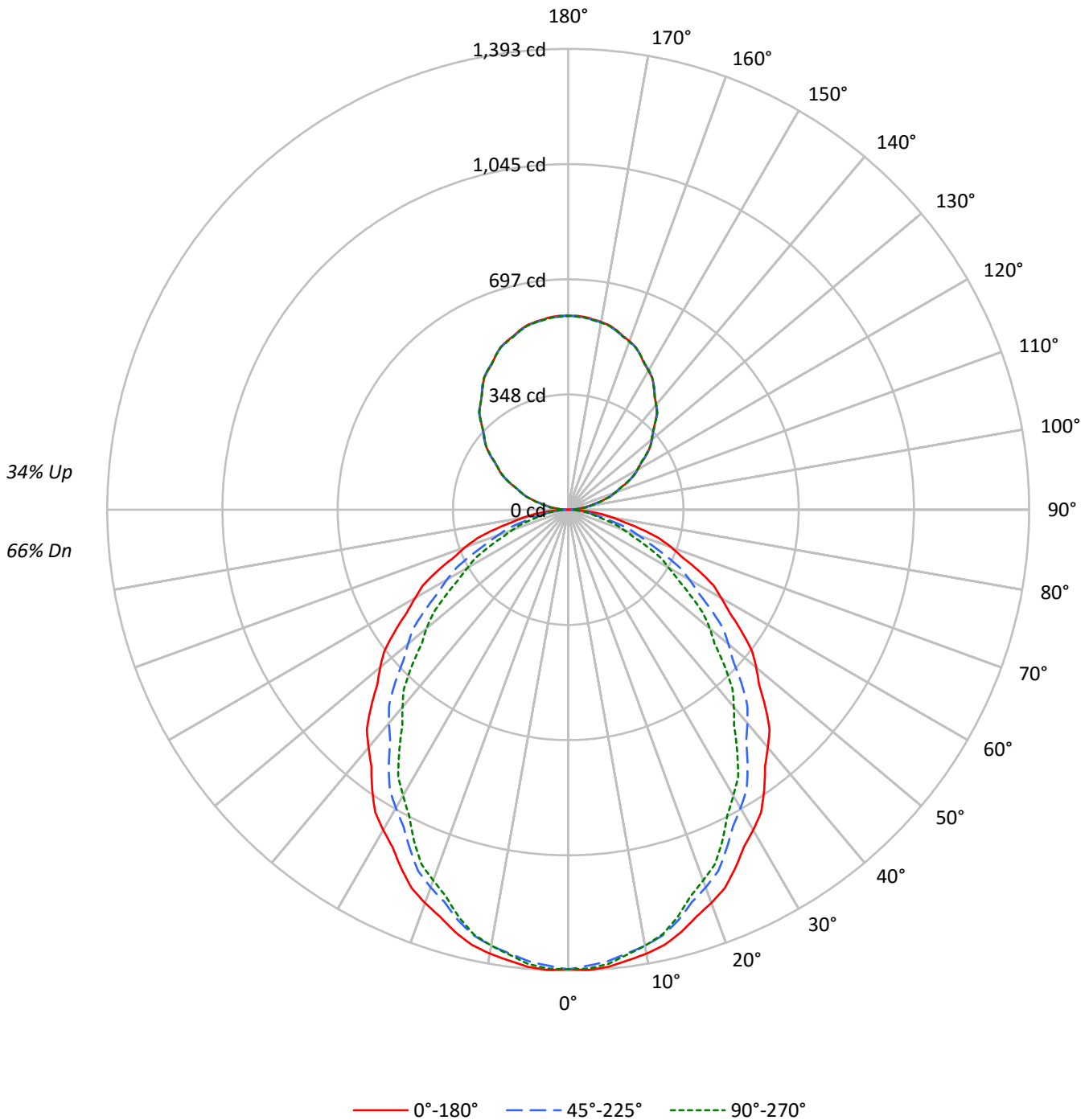
Input Watts (W): 37.7  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	111	111	111	111	105	105	105	105	92	92	92	81	81	81	71	71	71	66
1	102	98	94	90	96	92	89	86	82	79	77	72	70	69	64	62	61	57
2	93	86	79	74	87	81	75	71	72	68	64	64	61	58	56	54	52	48
3	85	76	68	62	80	72	65	60	64	59	54	57	53	49	50	47	44	41
4	78	67	59	53	73	64	56	51	57	51	47	51	46	43	45	42	39	35
5	72	60	52	46	67	57	50	44	51	45	41	46	41	37	41	37	34	31
6	66	54	46	40	62	51	44	39	46	40	36	42	37	33	37	33	30	27
7	61	49	41	35	58	47	39	34	42	36	32	38	33	29	34	30	27	24
8	57	45	37	31	54	43	35	30	39	33	28	35	30	26	31	27	24	22
9	53	41	33	28	50	39	32	27	36	30	25	32	27	24	29	25	22	20
10	50	38	30	26	47	36	29	25	33	27	23	30	25	22	27	23	20	18

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

	0°	45°	90°
0°	11215	11215	11215
5°	11240	11102	11171
10°	11170	10969	10969
15°	11041	10739	10659
20°	10865	10436	10244
25°	10640	10081	9825
30°	10421	9707	9300
35°	10178	9319	8774
40°	9887	8878	8205
45°	9618	8440	7626
50°	9311	7935	7013
55°	8983	7410	6348
60°	8622	6835	5667
65°	8290	6117	4999
70°	7808	5323	4244
75°	7199	4414	3450
80°	6281	3361	3166
85°	5317	3057	2853



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.5	2.7
10°-20°	363.9	7.5
20°-30°	525.5	10.9
30°-40°	595.6	12.3
40°-50°	575.2	11.9
50°-60°	478.3	9.9
60°-70°	330.3	6.8
70°-80°	167.4	3.5
80°-90°	44.7	0.9
90°-100°	38.6	0.8
100°-110°	114.5	2.4
110°-120°	194.3	4.0
120°-130°	256.2	5.3
130°-140°	287.7	5.9
140°-150°	282.7	5.8
150°-160°	237.8	4.9
160°-170°	158.2	3.3
170°-180°	55.4	1.1
0°-30°	1019.8	21.1
0°-40°	1615.5	33.4
0°-60°	2668.9	55.2
0°-90°	3211.3	66.4
90°-120°	347.4	7.2
90°-150°	1174.1	24.3
90°-180°	1626.0	33.6
0°-180°	4836.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1389	1389	1389	1389	1389	
5°	1387	1382	1370	1380	1378	132
15°	1321	1311	1285	1282	1275	372
25°	1194	1174	1132	1114	1103	550
35°	1033	998	946	910	890	645
45°	842	802	739	689	668	649
55°	638	594	526	473	451	571
65°	434	387	320	276	262	428
75°	231	191	142	118	111	244
85°	57	37	33	31	31	65
90°	1	6	10	13	14	4
95°	27	31	34	36	36	30
105°	106	106	108	109	111	112
115°	198	198	197	196	196	195
125°	288	288	287	286	286	256
135°	371	374	374	373	372	287
145°	451	453	453	453	451	282
155°	517	517	516	518	516	238
165°	562	561	560	563	561	158
175°	585	583	582	585	582	56
180°	586	586	586	586	586	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2
2.5°	1392.6	1391.8	1391.0	1390.3	1389.5	1388.1	1386.0	1384.0	1381.9	1379.8	1381.9
5°	1387.0	1386.1	1385.1	1384.2	1383.2	1381.4	1378.5	1375.7	1372.8	1370.0	1372.4
7.5°	1374.5	1373.5	1372.5	1371.5	1370.5	1368.2	1364.5	1360.8	1357.1	1353.4	1354.9
10°	1362.6	1361.4	1360.2	1359.0	1357.8	1355.1	1350.9	1346.6	1342.4	1338.1	1339.0
12.5°	1347.2	1345.9	1344.5	1343.1	1341.8	1338.6	1333.6	1328.5	1323.5	1318.5	1319.1
15°	1321.1	1319.0	1316.8	1314.7	1312.6	1308.6	1302.6	1296.7	1290.8	1284.9	1284.4
17.5°	1289.4	1286.3	1283.2	1280.2	1277.1	1272.0	1264.9	1257.8	1250.7	1243.6	1242.3
20°	1264.7	1261.6	1258.6	1255.5	1252.4	1246.9	1238.8	1230.8	1222.7	1214.7	1212.8
22.5°	1237.5	1234.0	1230.6	1227.1	1223.7	1217.6	1209.0	1200.4	1191.8	1183.2	1180.4
25°	1194.5	1190.2	1186.0	1181.7	1177.5	1170.5	1160.8	1151.1	1141.4	1131.7	1127.7
27.5°	1149.4	1144.1	1138.7	1133.4	1128.0	1120.2	1109.8	1099.5	1089.1	1078.8	1073.8
30°	1117.9	1112.0	1106.1	1100.2	1094.3	1085.8	1074.7	1063.6	1052.4	1041.3	1035.4
32.5°	1084.7	1078.1	1071.4	1064.7	1058.1	1049.0	1037.5	1026.0	1014.5	1003.0	996.2
35°	1032.8	1025.3	1017.7	1010.1	1002.6	992.9	981.1	969.2	957.4	945.6	937.6
37.5°	977.3	969.5	961.7	953.9	946.1	935.7	922.6	909.5	896.4	883.3	874.3
40°	938.2	930.4	922.6	914.8	907.0	896.3	882.8	869.4	855.9	842.4	832.5
42.5°	900.7	892.5	884.4	876.2	868.0	856.9	842.9	828.8	814.8	800.7	790.6
45°	842.4	833.7	824.9	816.2	807.4	796.0	781.8	767.6	753.4	739.3	727.7
47.5°	782.2	773.2	764.2	755.1	746.1	734.2	719.5	704.7	690.0	675.2	663.2
50°	741.4	732.2	722.9	713.7	704.5	692.3	677.2	662.1	646.9	631.8	620.0
52.5°	699.7	690.7	681.6	672.6	663.6	651.3	635.8	620.3	604.8	589.3	577.3
55°	638.2	628.7	619.3	609.8	600.4	588.0	572.6	557.2	541.9	526.5	514.2
57.5°	577.4	567.5	557.7	547.9	538.0	525.5	510.4	495.3	480.2	465.0	452.6
60°	534.0	524.5	515.1	505.6	496.1	483.9	468.7	453.6	438.5	423.3	411.0
62.5°	494.8	485.0	475.2	465.3	455.5	442.8	427.3	411.8	396.3	380.8	369.4
65°	434.0	423.8	413.6	403.5	393.3	380.7	365.5	350.4	335.3	320.2	310.0
67.5°	370.8	361.1	351.3	341.6	331.8	320.0	305.9	291.9	277.8	263.8	255.0
70°	330.8	320.9	310.9	301.0	291.1	279.4	265.9	252.4	239.0	225.5	217.7
72.5°	288.3	279.3	270.3	261.3	252.3	241.5	228.8	216.0	203.3	190.6	183.9
75°	230.8	222.1	213.3	204.6	195.8	185.9	174.8	163.7	152.6	141.5	136.0
77.5°	172.5	165.1	157.7	150.3	142.8	134.6	125.7	116.7	107.7	98.7	95.5
80°	135.1	128.2	121.4	114.5	107.7	100.7	93.6	86.5	79.4	72.3	71.6
82.5°	102.8	96.5	90.2	83.9	77.6	72.4	68.4	64.3	60.2	56.2	55.6
85°	57.4	52.7	48.0	43.3	38.5	35.8	35.1	34.4	33.7	33.0	32.5
87.5°	19.8	18.6	17.3	16.0	14.7	14.0	14.0	14.0	13.9	13.9	13.8
90°	1.4	2.5	3.6	4.7	5.8	6.7	7.6	8.4	9.2	10.0	10.6
92.5°	9.7	11.0	12.2	13.5	14.8	15.7	16.3	16.8	17.4	17.9	18.3
95°	27.2	28.1	29.0	29.9	30.8	31.6	32.3	33.0	33.7	34.4	34.7
97.5°	47.5	48.2	48.9	49.7	50.4	51.2	52.0	52.8	53.6	54.5	54.8
100°	63.4	63.8	64.2	64.6	65.1	65.7	66.6	67.5	68.4	69.3	69.5
102.5°	80.1	80.3	80.4	80.6	80.8	81.3	82.1	82.9	83.7	84.6	84.8
105°	105.6	105.7	105.8	105.9	106.0	106.2	106.6	107.0	107.4	107.8	108.1
107.5°	132.3	132.4	132.6	132.7	132.8	132.9	133.0	133.0	133.1	133.1	133.4
110°	150.4	150.6	150.8	151.0	151.2	151.3	151.2	151.1	151.0	150.9	150.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	169.3	169.3	169.4	169.4	169.5	169.4	169.2	169.0	168.8	168.7	168.6
115°	197.6	197.6	197.6	197.6	197.6	197.5	197.3	197.1	196.9	196.7	196.6
117.5°	224.2	224.3	224.4	224.5	224.5	224.5	224.4	224.2	224.1	223.9	223.6
120°	242.0	242.4	242.8	243.2	243.6	243.6	243.3	243.0	242.7	242.4	241.9
122.5°	260.5	260.6	260.8	260.9	261.1	261.1	261.0	260.8	260.7	260.6	260.2
125°	287.7	287.7	287.7	287.7	287.7	287.7	287.6	287.5	287.4	287.3	287.1
127.5°	312.5	312.8	313.1	313.4	313.7	313.8	313.6	313.4	313.3	313.1	312.9
130°	329.9	330.2	330.5	330.8	331.1	331.2	331.2	331.2	331.2	331.2	331.0
132.5°	347.6	347.9	348.1	348.3	348.5	348.6	348.5	348.4	348.4	348.3	348.1
135°	371.1	371.7	372.3	372.9	373.5	373.8	373.8	373.8	373.8	373.8	373.6
137.5°	396.7	397.0	397.2	397.5	397.8	398.0	398.2	398.4	398.5	398.7	398.4
140°	413.7	413.9	414.1	414.3	414.5	414.6	414.6	414.6	414.6	414.6	414.5
142.5°	429.3	429.5	429.7	429.9	430.1	430.2	430.1	430.0	429.9	429.8	429.8
145°	450.9	451.3	451.7	452.1	452.5	452.7	452.8	452.9	453.0	453.1	453.0
147.5°	472.3	472.7	473.2	473.7	474.2	474.4	474.3	474.2	474.2	474.1	474.0
150°	485.3	485.7	486.1	486.5	486.9	487.1	487.1	487.1	487.1	487.1	487.1
152.5°	497.6	497.9	498.1	498.4	498.6	498.8	498.8	498.9	499.0	499.1	499.3
155°	516.6	516.6	516.6	516.6	516.6	516.5	516.4	516.3	516.2	516.1	516.5
157.5°	532.5	532.3	532.2	532.0	531.8	531.7	531.7	531.7	531.6	531.6	531.9
160°	542.0	541.9	541.8	541.7	541.6	541.5	541.4	541.3	541.2	541.1	541.4
162.5°	550.7	550.4	550.1	549.9	549.6	549.4	549.3	549.2	549.1	549.0	549.6
165°	562.3	562.0	561.7	561.4	561.1	560.9	560.7	560.5	560.3	560.1	560.7
167.5°	571.3	570.9	570.5	570.1	569.6	569.4	569.4	569.5	569.5	569.5	570.1
170°	576.4	575.9	575.4	574.9	574.4	574.2	574.3	574.4	574.5	574.6	575.2
172.5°	580.0	579.6	579.2	578.8	578.3	578.1	578.1	578.2	578.2	578.2	578.9
175°	585.0	584.5	584.0	583.5	583.0	582.7	582.6	582.5	582.4	582.3	583.0
177.5°	586.6	586.2	585.8	585.4	585.0	584.8	584.8	584.8	584.8	584.8	585.4
180°	585.9	585.9	585.9	585.9	585.9	585.9	585.9	585.9	585.9	585.9	585.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2
2.5°	1384.0	1386.0	1388.1	1389.1	1388.9	1388.7	1388.5	1388.3
5°	1374.7	1377.1	1379.5	1380.4	1379.9	1379.5	1379.0	1378.5
7.5°	1356.4	1358.0	1359.5	1359.8	1359.1	1358.3	1357.6	1356.8
10°	1340.0	1340.9	1341.9	1341.9	1340.9	1340.0	1339.0	1338.1
12.5°	1319.7	1320.2	1320.8	1320.4	1319.1	1317.8	1316.4	1315.1
15°	1284.0	1283.5	1283.0	1282.0	1280.3	1278.6	1277.0	1275.3
17.5°	1241.0	1239.7	1238.3	1236.4	1233.9	1231.4	1228.9	1226.4
20°	1210.9	1209.0	1207.1	1204.7	1201.6	1198.5	1195.4	1192.4
22.5°	1177.6	1174.7	1171.9	1169.2	1166.7	1164.2	1161.7	1159.2
25°	1123.7	1119.7	1115.7	1112.5	1110.1	1107.8	1105.4	1103.0
27.5°	1068.8	1063.9	1058.9	1054.7	1051.3	1047.9	1044.5	1041.1
30°	1029.5	1023.6	1017.7	1012.8	1009.1	1005.3	1001.5	997.7
32.5°	989.3	982.5	975.6	970.4	966.8	963.2	959.6	956.0
35°	929.5	921.5	913.5	907.3	903.1	898.8	894.5	890.3
37.5°	865.3	856.3	847.3	840.7	836.5	832.2	828.0	823.7
40°	822.6	812.6	802.7	795.6	791.4	787.1	782.9	778.6
42.5°	780.5	770.4	760.3	753.0	748.5	744.1	739.7	735.2
45°	716.1	704.5	692.9	685.0	680.7	676.5	672.2	668.0
47.5°	651.2	639.2	627.2	618.8	614.2	609.5	604.8	600.1
50°	608.2	596.4	584.5	576.4	571.9	567.4	562.9	558.4
52.5°	565.3	553.3	541.2	532.9	528.2	523.5	518.9	514.2
55°	501.9	489.6	477.4	469.0	464.5	460.0	455.5	451.0
57.5°	440.1	427.6	415.1	407.2	403.8	400.4	397.0	393.6
60°	398.8	386.5	374.2	366.1	362.4	358.6	354.8	351.0
62.5°	358.1	346.8	335.4	328.2	325.2	322.2	319.1	316.1
65°	299.8	289.7	279.5	273.0	270.2	267.3	264.5	261.7
67.5°	246.3	237.6	228.8	222.9	219.8	216.6	213.5	210.4
70°	209.9	202.1	194.3	189.2	186.9	184.5	182.1	179.8
72.5°	177.3	170.6	163.9	159.5	157.4	155.2	153.0	150.8
75°	130.6	125.2	119.7	116.3	114.9	113.5	112.0	110.6
77.5°	92.4	89.2	86.0	84.2	83.8	83.4	83.0	82.5
80°	70.9	70.2	69.5	69.0	68.8	68.5	68.3	68.1
82.5°	55.1	54.6	54.1	53.7	53.5	53.2	53.0	52.8
85°	32.0	31.6	31.1	30.8	30.8	30.8	30.8	30.8
87.5°	13.8	13.7	13.6	13.7	13.9	14.2	14.4	14.6
90°	11.2	11.8	12.4	12.8	13.0	13.2	13.4	13.6
92.5°	18.7	19.0	19.4	19.6	19.8	19.9	20.0	20.1
95°	35.0	35.3	35.6	35.8	35.8	35.8	35.8	35.8
97.5°	55.2	55.6	55.9	56.1	56.1	56.1	56.1	56.1
100°	69.7	69.9	70.1	70.2	70.2	70.2	70.2	70.2
102.5°	85.1	85.4	85.7	85.9	85.9	86.0	86.1	86.2
105°	108.5	108.8	109.1	109.4	109.7	110.0	110.3	110.6
107.5°	133.7	134.0	134.3	134.4	134.4	134.4	134.3	134.3
110°	150.5	150.3	150.1	150.1	150.4	150.7	151.0	151.3





TEST NUMBER: P333058

CATALOG NUMBER: S124RDIW-S795D470U835-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	168.6	168.5	168.5	168.5	168.6	168.6	168.7	168.7
115°	196.5	196.4	196.3	196.2	196.1	196.0	195.9	195.8
117.5°	223.3	222.9	222.6	222.3	222.1	221.9	221.7	221.5
120°	241.4	240.9	240.4	240.3	240.5	240.7	240.9	241.1
122.5°	259.9	259.5	259.2	258.8	258.5	258.1	257.7	257.4
125°	286.9	286.7	286.5	286.3	286.1	285.9	285.7	285.5
127.5°	312.7	312.5	312.3	312.1	312.0	311.8	311.7	311.5
130°	330.8	330.6	330.4	330.1	329.7	329.3	328.9	328.5
132.5°	347.9	347.7	347.5	347.3	347.1	347.0	346.8	346.7
135°	373.4	373.2	373.0	372.8	372.5	372.2	371.9	371.6
137.5°	398.1	397.9	397.6	397.5	397.6	397.6	397.7	397.8
140°	414.4	414.3	414.2	414.1	414.0	413.9	413.8	413.7
142.5°	429.8	429.8	429.8	429.7	429.7	429.7	429.7	429.7
145°	452.9	452.8	452.7	452.5	452.2	451.9	451.6	451.3
147.5°	473.9	473.8	473.8	473.7	473.6	473.5	473.4	473.3
150°	487.1	487.1	487.1	487.1	487.0	486.9	486.8	486.7
152.5°	499.6	499.8	500.1	500.0	499.8	499.5	499.3	499.0
155°	516.9	517.3	517.7	517.7	517.3	516.9	516.5	516.1
157.5°	532.2	532.5	532.8	532.8	532.5	532.1	531.8	531.4
160°	541.7	542.0	542.3	542.2	541.7	541.2	540.6	540.1
162.5°	550.1	550.7	551.2	551.2	550.7	550.2	549.7	549.2
165°	561.3	561.9	562.5	562.6	562.2	561.8	561.4	561.0
167.5°	570.7	571.3	571.9	571.9	571.3	570.7	570.0	569.4
170°	575.8	576.4	577.0	576.9	576.2	575.5	574.8	574.1
172.5°	579.6	580.3	580.9	580.9	580.2	579.5	578.8	578.1
175°	583.7	584.4	585.1	585.1	584.4	583.7	583.0	582.3
177.5°	586.0	586.5	587.1	587.0	586.4	585.8	585.1	584.5
180°	585.9	585.9	585.9	585.9	585.9	585.9	585.9	585.9

(END OF REPORT)