

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: P333057

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333057
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: S124RDIW-S795D470U835-4F0-1E-UDD-F
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, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5085.6 lumens
Efficiency: N/A
Efficacy: 134.9 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: Semi-Direct

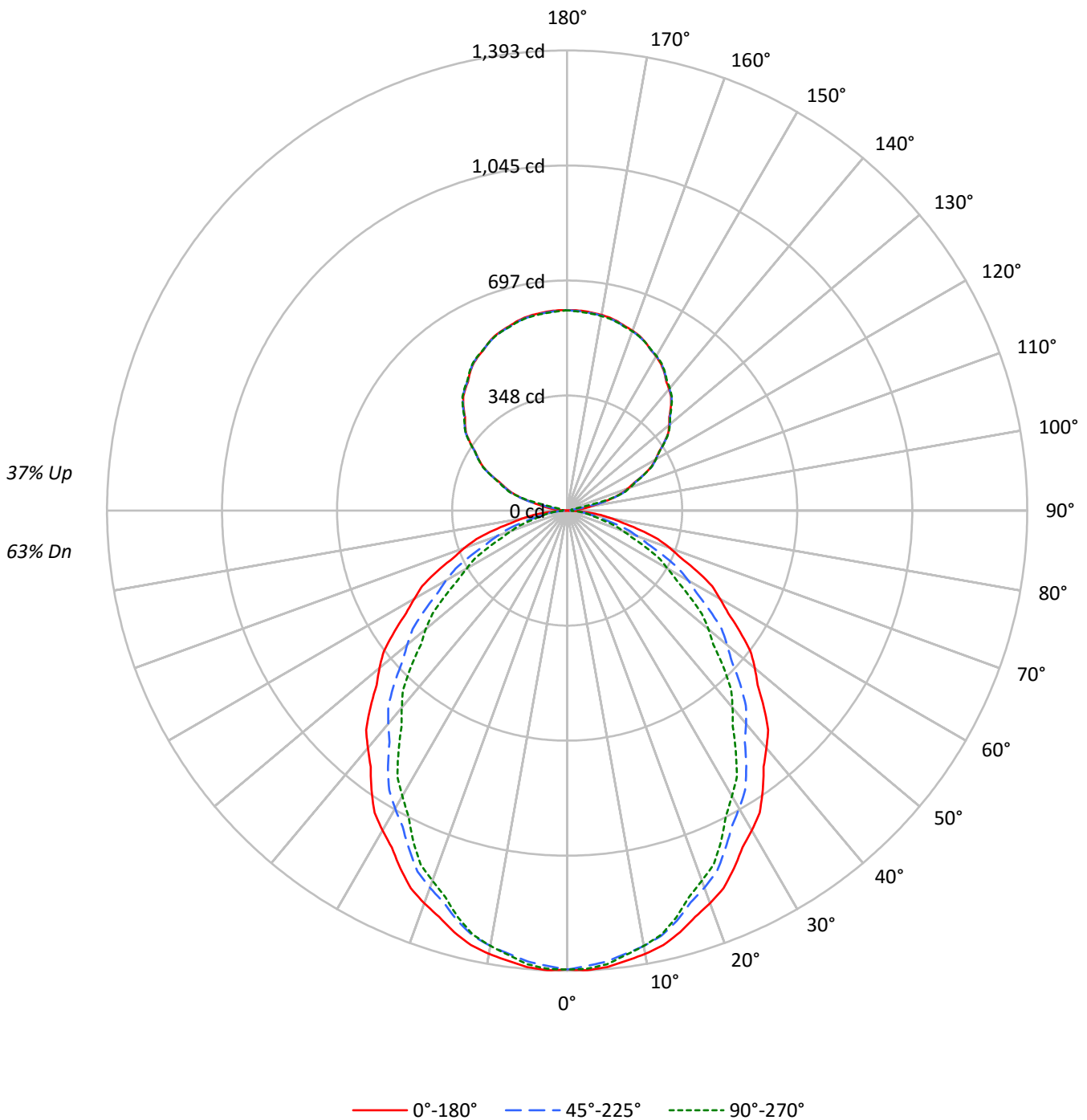
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	50	30	10	50	30	10	0														
RCR																																						
0	110	110	110	110	103	103	103	103	91	91	91	79	79	79	68	68	68	63																				
1	101	97	93	90	95	91	88	85	80	78	75	70	68	67	61	60	58	54																				
2	92	85	79	74	86	80	75	70	71	66	63	62	59	56	54	52	50	46																				
3	84	75	68	62	79	71	64	59	63	57	53	55	51	48	48	45	43	39																				
4	77	67	59	53	72	63	56	50	56	50	46	49	45	41	43	40	37	34																				
5	71	60	51	45	67	56	49	43	50	44	40	44	40	36	39	35	32	29																				
6	66	54	45	40	62	51	43	38	45	39	35	40	35	32	36	32	29	26																				
7	61	49	41	35	57	46	39	34	41	35	31	37	32	28	33	29	26	23																				
8	57	44	36	31	53	42	35	30	38	32	28	34	29	25	30	26	23	21																				
9	53	41	33	28	50	39	32	27	35	29	25	31	26	23	28	24	21	19																				
10	49	37	30	25	47	36	29	24	32	26	23	29	24	21	26	22	19	17																				

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	2.6
10°-20°	363.9	7.2
20°-30°	525.5	10.3
30°-40°	595.6	11.7
40°-50°	575.2	11.3
50°-60°	478.3	9.4
60°-70°	330.3	6.5
70°-80°	167.4	3.3
80°-90°	44.7	0.9
90°-100°	20.7	0.4
100°-110°	132.1	2.6
110°-120°	252.8	5.0
120°-130°	320.9	6.3
130°-140°	343.3	6.8
140°-150°	321.0	6.3
150°-160°	258.9	5.1
160°-170°	167.0	3.3
170°-180°	57.6	1.1
0°-30°	1019.8	20.1
0°-40°	1615.5	31.8
0°-60°	2668.9	52.5
0°-90°	3211.3	63.1
90°-120°	405.6	8.0
90°-150°	1390.9	27.3
90°-180°	1874.0	36.8
0°-180°	5085.6	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°	25	10	10	13	13	32
105°	136	139	141	144	129	143
115°	255	256	256	256	256	251
125°	358	360	359	360	361	320
135°	444	444	446	446	447	342
145°	512	513	514	514	515	320
155°	562	562	561	562	561	259
165°	592	590	590	593	590	167
175°	606	603	604	607	602	58
180°	606	606	606	606	606	



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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°	5.7	5.8	5.8	5.9	6.0	6.4	7.2	8.0	8.8	9.6	10.2
95°	24.9	21.5	18.1	14.7	11.2	9.6	9.7	9.8	9.9	10.0	10.6
97.5°	52.9	55.1	57.2	59.3	61.5	56.9	45.7	34.4	23.2	12.0	12.0
100°	74.3	76.1	78.0	79.8	81.6	75.5	61.6	47.7	33.8	19.9	18.2
102.5°	98.3	99.6	100.9	102.2	103.6	103.3	101.5	99.7	97.9	96.1	77.6
105°	136.4	137.0	137.6	138.2	138.8	139.4	139.9	140.4	140.9	141.4	142.3
107.5°	171.9	172.2	172.5	172.8	173.1	173.6	174.2	174.9	175.6	176.3	176.7
110°	195.8	196.1	196.4	196.7	197.0	197.4	198.0	198.7	199.3	199.9	200.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	219.0	219.5	220.1	220.6	221.2	221.6	221.9	222.1	222.4	222.7	222.7
115°	254.7	255.0	255.3	255.6	255.9	256.0	255.9	255.8	255.7	255.6	255.8
117.5°	286.9	287.3	287.7	288.1	288.5	288.8	289.0	289.2	289.5	289.7	289.6
120°	308.6	309.0	309.4	309.8	310.2	310.4	310.3	310.2	310.1	310.0	310.2
122.5°	328.9	329.2	329.4	329.7	329.9	330.1	330.2	330.4	330.5	330.7	330.8
125°	358.0	358.4	358.8	359.2	359.6	359.7	359.5	359.3	359.1	358.9	359.2
127.5°	385.6	385.7	385.8	385.9	386.0	386.3	386.7	387.2	387.7	388.1	388.1
130°	403.3	403.4	403.6	403.7	403.8	404.0	404.3	404.6	404.9	405.2	405.3
132.5°	419.7	419.8	420.0	420.2	420.4	420.7	421.1	421.4	421.8	422.2	422.3
135°	444.1	444.0	443.9	443.8	443.7	443.9	444.3	444.7	445.1	445.5	445.7
137.5°	465.8	465.8	465.9	465.9	466.0	466.2	466.6	467.1	467.5	468.0	468.2
140°	479.9	480.1	480.3	480.5	480.7	480.9	481.1	481.4	481.6	481.8	482.1
142.5°	492.6	493.0	493.4	493.7	494.1	494.3	494.4	494.6	494.7	494.8	495.0
145°	512.1	512.4	512.7	513.0	513.3	513.5	513.5	513.5	513.5	513.5	513.6
147.5°	527.6	528.2	528.7	529.3	529.9	530.1	530.0	529.9	529.8	529.7	529.8
150°	538.9	539.3	539.7	540.1	540.5	540.6	540.5	540.4	540.3	540.2	540.2
152.5°	548.3	548.6	548.9	549.2	549.6	549.6	549.5	549.3	549.1	548.9	549.1
155°	561.5	561.6	561.7	561.8	561.9	561.8	561.5	561.2	560.9	560.6	561.0
157.5°	572.7	572.6	572.5	572.5	572.4	572.2	571.9	571.5	571.2	570.9	571.4
160°	579.2	578.9	578.6	578.3	578.0	577.8	577.7	577.6	577.5	577.4	578.0
162.5°	585.0	584.6	584.2	583.8	583.5	583.2	583.1	583.0	582.9	582.8	583.4
165°	592.3	591.8	591.3	590.8	590.3	590.1	590.1	590.1	590.1	590.1	590.9
167.5°	598.1	597.6	597.1	596.6	596.0	595.7	595.7	595.6	595.6	595.5	596.4
170°	601.4	600.8	600.2	599.6	599.0	598.7	598.8	598.9	599.0	599.1	599.9
172.5°	603.6	603.0	602.4	601.8	601.2	600.9	601.0	601.1	601.2	601.3	602.1
175°	605.9	605.3	604.7	604.1	603.5	603.3	603.4	603.5	603.6	603.7	604.6
177.5°	607.0	606.5	605.9	605.3	604.8	604.6	604.7	604.9	605.0	605.2	605.8
180°	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9



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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°	10.8	11.4	12.0	12.3	12.4	12.4	12.5	12.5
95°	11.2	11.8	12.4	12.7	12.8	12.9	13.0	13.1
97.5°	12.1	12.1	12.2	12.3	12.4	12.5	12.6	12.7
100°	16.5	14.8	13.1	12.3	12.4	12.5	12.6	12.7
102.5°	59.1	40.7	22.2	13.0	13.0	13.0	13.0	13.1
105°	143.2	144.1	145.0	143.7	140.0	136.4	132.8	129.2
107.5°	177.2	177.6	178.1	178.5	178.9	179.2	179.6	180.0
110°	200.3	200.5	200.7	200.9	201.2	201.5	201.8	202.1



TEST NUMBER: P333057

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	222.6	222.6	222.5	222.7	223.1	223.5	223.9	224.2
115°	256.0	256.2	256.4	256.5	256.5	256.5	256.5	256.5
117.5°	289.6	289.6	289.5	289.5	289.4	289.4	289.4	289.3
120°	310.4	310.6	310.8	310.8	310.6	310.4	310.2	310.0
122.5°	330.9	331.0	331.1	331.1	330.9	330.7	330.5	330.3
125°	359.5	359.8	360.1	360.3	360.4	360.5	360.6	360.7
127.5°	388.0	387.9	387.9	387.8	387.7	387.6	387.6	387.5
130°	405.4	405.5	405.6	405.6	405.6	405.6	405.6	405.6
132.5°	422.4	422.5	422.6	422.6	422.5	422.5	422.4	422.3
135°	445.9	446.1	446.3	446.5	446.7	446.9	447.1	447.3
137.5°	468.4	468.6	468.9	468.9	468.9	468.8	468.8	468.7
140°	482.4	482.7	483.0	483.2	483.3	483.4	483.5	483.6
142.5°	495.2	495.5	495.7	495.8	495.8	495.9	495.9	495.9
145°	513.7	513.8	513.9	514.0	514.2	514.4	514.6	514.8
147.5°	529.9	529.9	530.0	530.1	530.2	530.3	530.4	530.5
150°	540.2	540.2	540.2	540.3	540.4	540.5	540.6	540.7
152.5°	549.2	549.4	549.6	549.6	549.6	549.5	549.4	549.4
155°	561.4	561.8	562.2	562.3	562.0	561.7	561.4	561.1
157.5°	571.9	572.4	572.9	572.9	572.4	571.9	571.4	570.9
160°	578.6	579.2	579.8	579.8	579.2	578.6	578.0	577.4
162.5°	584.0	584.6	585.2	585.2	584.5	583.8	583.1	582.5
165°	591.7	592.5	593.3	593.2	592.3	591.4	590.5	589.6
167.5°	597.3	598.2	599.1	599.0	598.0	597.0	596.0	595.0
170°	600.7	601.5	602.4	602.3	601.2	600.2	599.2	598.2
172.5°	602.9	603.7	604.5	604.4	603.3	602.2	601.1	600.0
175°	605.5	606.4	607.3	607.1	605.9	604.7	603.5	602.3
177.5°	606.5	607.1	607.8	607.6	606.7	605.7	604.7	603.8
180°	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9

(END OF REPORT)