

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: P333057-840

Luminaire Tested: **S124RDIW-S795D470U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333057-840
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-S795D470U840-4F0-1E-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: 5135.7 lumens
Efficiency: N/A
Efficacy: 136.2 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

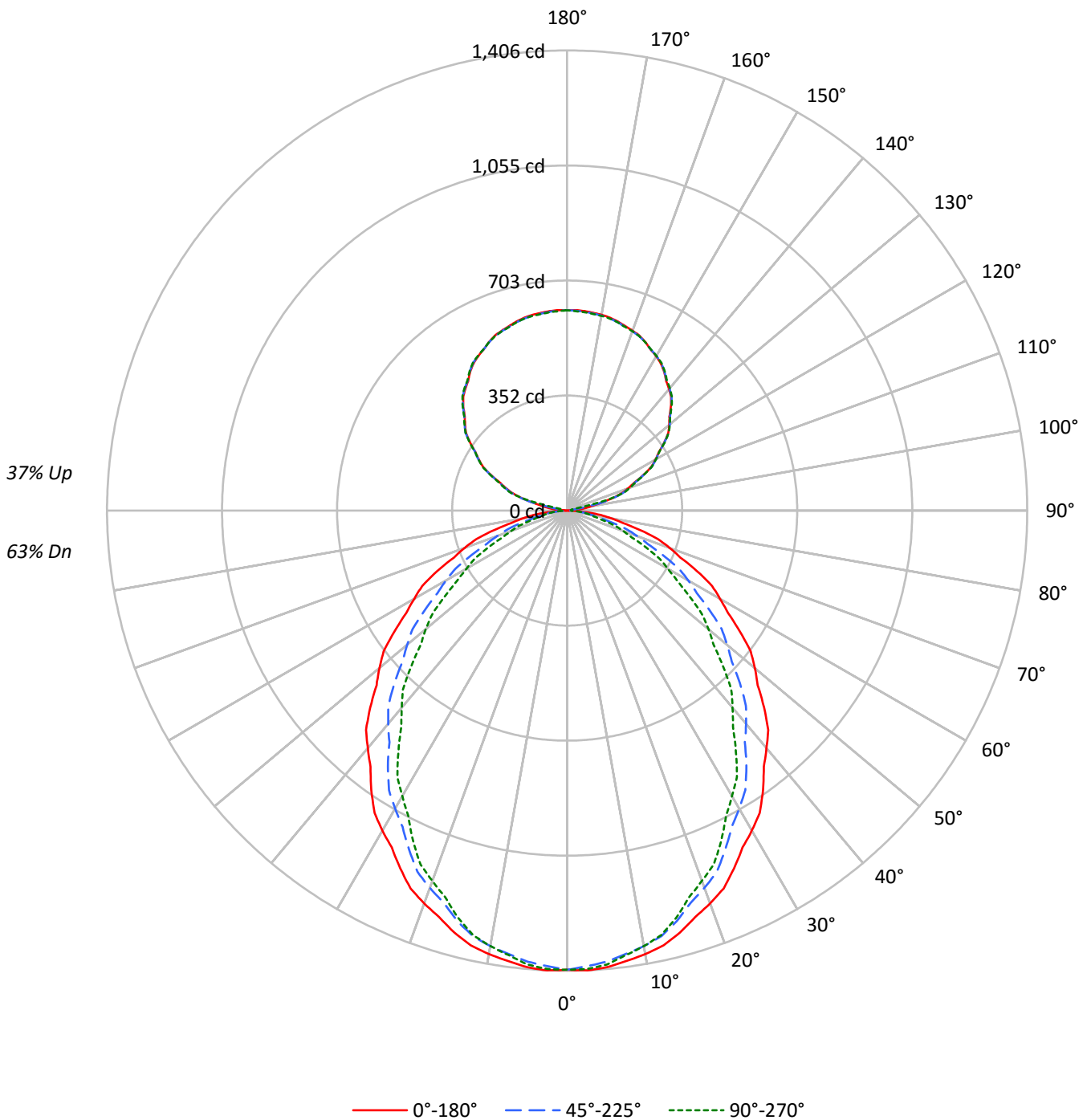
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11326	11326	11326
5°	11351	11212	11281
10°	11280	11077	11077
15°	11150	10845	10764
20°	10972	10539	10345
25°	10745	10180	9922
30°	10523	9803	9392
35°	10279	9411	8861
40°	9985	8965	8286
45°	9712	8524	7702
50°	9403	8013	7082
55°	9071	7484	6410
60°	8707	6902	5724
65°	8373	6178	5049
70°	7886	5375	4286
75°	7271	4457	3484
80°	6341	3394	3199
85°	5372	3084	2881



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.8	2.6
10°-20°	367.5	7.2
20°-30°	530.6	10.3
30°-40°	601.5	11.7
40°-50°	580.8	11.3
50°-60°	483.0	9.4
60°-70°	333.5	6.5
70°-80°	169.1	3.3
80°-90°	45.1	0.9
90°-100°	20.9	0.4
100°-110°	133.4	2.6
110°-120°	255.3	5.0
120°-130°	324.0	6.3
130°-140°	346.7	6.8
140°-150°	324.2	6.3
150°-160°	261.4	5.1
160°-170°	168.6	3.3
170°-180°	58.1	1.1
0°-30°	1029.9	20.1
0°-40°	1631.4	31.8
0°-60°	2695.2	52.5
0°-90°	3242.9	63.1
90°-120°	409.6	8.0
90°-150°	1404.6	27.3
90°-180°	1893.0	36.9
0°-180°	5135.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1403	1403	1403	1403	1403	
5°	1401	1396	1384	1394	1392	133
15°	1334	1324	1298	1295	1288	376
25°	1206	1186	1143	1125	1114	556
35°	1043	1008	955	919	899	651
45°	851	810	747	696	675	656
55°	644	600	532	478	455	576
65°	438	391	323	279	264	433
75°	233	193	143	119	112	246
85°	58	38	33	31	31	65
90°	1	6	10	13	14	4
95°	25	10	10	13	13	32
105°	138	140	143	146	130	144
115°	257	258	258	259	259	253
125°	362	363	362	364	364	323
135°	448	448	450	451	452	345
145°	517	518	519	519	520	323
155°	567	567	566	568	567	261
165°	598	596	596	599	595	169
175°	612	609	610	613	608	58
180°	612	612	612	612	612	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9
2.5°	1406.3	1405.5	1404.7	1404.0	1403.2	1401.8	1399.7	1397.7	1395.5	1393.4	1395.5
5°	1400.7	1399.8	1398.8	1397.9	1396.8	1395.0	1392.1	1389.3	1386.3	1383.5	1385.9
7.5°	1388.1	1387.0	1386.0	1385.0	1384.0	1381.7	1378.0	1374.2	1370.5	1366.8	1368.3
10°	1376.0	1374.8	1373.6	1372.4	1371.2	1368.5	1364.2	1359.9	1355.6	1351.3	1352.2
12.5°	1360.5	1359.2	1357.8	1356.3	1355.0	1351.8	1346.8	1341.6	1336.6	1331.5	1332.1
15°	1334.1	1332.0	1329.8	1327.7	1325.5	1321.5	1315.5	1309.5	1303.5	1297.6	1297.1
17.5°	1302.1	1299.0	1295.9	1292.8	1289.7	1284.5	1277.4	1270.2	1263.0	1255.9	1254.6
20°	1277.2	1274.0	1271.0	1267.9	1264.8	1259.2	1251.0	1242.9	1234.8	1226.7	1224.8
22.5°	1249.7	1246.2	1242.7	1239.2	1235.8	1229.6	1220.9	1212.2	1203.6	1194.9	1192.0
25°	1206.3	1201.9	1197.7	1193.4	1189.1	1182.0	1172.3	1162.5	1152.7	1142.9	1138.8
27.5°	1160.7	1155.4	1149.9	1144.6	1139.1	1131.3	1120.7	1110.3	1099.8	1089.4	1084.4
30°	1128.9	1123.0	1117.0	1111.1	1105.1	1096.5	1085.3	1074.1	1062.8	1051.6	1045.6
32.5°	1095.4	1088.7	1082.0	1075.2	1068.5	1059.3	1047.7	1036.1	1024.5	1012.9	1006.0
35°	1043.0	1035.4	1027.7	1020.1	1012.5	1002.7	990.8	978.8	966.8	954.9	946.8
37.5°	986.9	979.1	971.2	963.3	955.4	944.9	931.7	918.5	905.2	892.0	882.9
40°	947.5	939.6	931.7	923.8	915.9	905.1	891.5	878.0	864.3	850.7	840.7
42.5°	909.6	901.3	893.1	884.8	876.6	865.4	851.2	837.0	822.8	808.6	798.4
45°	850.7	841.9	833.0	824.3	815.4	803.9	789.5	775.2	760.8	746.6	734.9
47.5°	789.9	780.8	771.7	762.5	753.5	741.4	726.6	711.7	696.8	681.9	669.7
50°	748.7	739.4	730.0	720.7	711.4	699.1	683.9	668.6	653.3	638.0	626.1
52.5°	706.6	697.5	688.3	679.2	670.1	657.7	642.1	626.4	610.8	595.1	583.0
55°	644.5	634.9	625.4	615.8	606.3	593.8	578.2	562.7	547.2	531.7	519.3
57.5°	583.1	573.1	563.2	553.3	543.3	530.7	515.4	500.2	484.9	469.6	457.1
60°	539.3	529.7	520.2	510.6	501.0	488.7	473.3	458.1	442.8	427.5	415.1
62.5°	499.7	489.8	479.9	469.9	460.0	447.2	431.5	415.9	400.2	384.6	373.0
65°	438.3	428.0	417.7	407.5	397.2	384.5	369.1	353.9	338.6	323.4	313.1
67.5°	374.5	364.7	354.8	345.0	335.1	323.2	308.9	294.8	280.5	266.4	257.5
70°	334.1	324.1	314.0	304.0	294.0	282.2	268.5	254.9	241.4	227.7	219.8
72.5°	291.1	282.1	273.0	263.9	254.8	243.9	231.1	218.1	205.3	192.5	185.7
75°	233.1	224.3	215.4	206.6	197.7	187.7	176.5	165.3	154.1	142.9	137.3
77.5°	174.2	166.7	159.3	151.8	144.2	135.9	126.9	117.9	108.8	99.7	96.4
80°	136.4	129.5	122.6	115.6	108.8	101.7	94.5	87.4	80.2	73.0	72.3
82.5°	103.8	97.5	91.1	84.7	78.4	73.1	69.1	64.9	60.8	56.8	56.1
85°	58.0	53.2	48.5	43.7	38.9	36.2	35.4	34.7	34.0	33.3	32.8
87.5°	20.0	18.8	17.5	16.2	14.8	14.1	14.1	14.1	14.0	14.0	13.9
90°	1.4	2.5	3.6	4.7	5.9	6.8	7.7	8.5	9.3	10.1	10.7
92.5°	5.8	5.9	5.9	6.0	6.1	6.5	7.3	8.1	8.9	9.7	10.3
95°	25.1	21.7	18.3	14.8	11.3	9.7	9.8	9.9	10.0	10.1	10.7
97.5°	53.4	55.6	57.8	59.9	62.1	57.5	46.2	34.7	23.4	12.1	12.1
100°	75.0	76.9	78.8	80.6	82.4	76.2	62.2	48.2	34.1	20.1	18.4
102.5°	99.3	100.6	101.9	103.2	104.6	104.3	102.5	100.7	98.9	97.0	78.4
105°	137.7	138.4	139.0	139.6	140.2	140.8	141.3	141.8	142.3	142.8	143.7
107.5°	173.6	173.9	174.2	174.5	174.8	175.3	175.9	176.6	177.3	178.0	178.4
110°	197.7	198.0	198.3	198.6	198.9	199.3	200.0	200.7	201.3	201.9	202.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	221.2	221.7	222.3	222.8	223.4	223.8	224.1	224.3	224.6	224.9	224.9
115°	257.2	257.5	257.8	258.1	258.4	258.5	258.4	258.3	258.2	258.1	258.3
117.5°	289.7	290.1	290.5	290.9	291.3	291.6	291.9	292.1	292.4	292.6	292.5
120°	311.6	312.0	312.5	312.9	313.3	313.5	313.4	313.3	313.2	313.1	313.3
122.5°	332.1	332.4	332.6	333.0	333.2	333.4	333.5	333.7	333.8	334.0	334.1
125°	361.5	361.9	362.3	362.7	363.1	363.2	363.0	362.8	362.6	362.4	362.7
127.5°	389.4	389.5	389.6	389.7	389.8	390.1	390.5	391.0	391.5	391.9	391.9
130°	407.3	407.4	407.6	407.7	407.8	408.0	408.3	408.6	408.9	409.2	409.3
132.5°	423.8	423.9	424.1	424.3	424.5	424.9	425.3	425.6	426.0	426.4	426.5
135°	448.5	448.4	448.3	448.2	448.1	448.3	448.7	449.1	449.5	449.9	450.1
137.5°	470.4	470.4	470.5	470.5	470.6	470.8	471.2	471.7	472.1	472.6	472.8
140°	484.6	484.8	485.0	485.2	485.4	485.6	485.8	486.1	486.4	486.6	486.9
142.5°	497.5	497.9	498.3	498.6	499.0	499.2	499.3	499.5	499.6	499.7	499.9
145°	517.2	517.5	517.8	518.1	518.4	518.6	518.6	518.6	518.6	518.6	518.7
147.5°	532.8	533.4	533.9	534.5	535.1	535.3	535.2	535.1	535.0	534.9	535.0
150°	544.2	544.6	545.0	545.4	545.8	545.9	545.8	545.7	545.6	545.5	545.5
152.5°	553.7	554.0	554.3	554.6	555.0	555.0	554.9	554.7	554.5	554.3	554.5
155°	567.0	567.1	567.2	567.3	567.4	567.3	567.0	566.7	566.4	566.1	566.5
157.5°	578.3	578.2	578.1	578.1	578.0	577.8	577.5	577.1	576.8	576.5	577.0
160°	584.9	584.6	584.3	584.0	583.7	583.5	583.4	583.3	583.2	583.1	583.7
162.5°	590.8	590.4	590.0	589.6	589.3	589.0	588.9	588.8	588.7	588.5	589.2
165°	598.1	597.6	597.1	596.6	596.1	595.9	595.9	595.9	595.9	595.9	596.7
167.5°	604.0	603.5	603.0	602.5	601.9	601.6	601.6	601.5	601.5	601.4	602.3
170°	607.3	606.7	606.1	605.5	604.9	604.6	604.7	604.8	604.9	605.0	605.8
172.5°	609.6	608.9	608.3	607.7	607.1	606.8	606.9	607.0	607.1	607.2	608.0
175°	611.9	611.3	610.7	610.1	609.5	609.3	609.4	609.5	609.6	609.7	610.6
177.5°	613.0	612.5	611.9	611.3	610.8	610.6	610.7	610.9	611.0	611.2	611.8
180°	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9
2.5°	1397.7	1399.7	1401.8	1402.8	1402.6	1402.4	1402.2	1402.0
5°	1388.3	1390.7	1393.1	1394.0	1393.5	1393.1	1392.6	1392.1
7.5°	1369.8	1371.4	1372.9	1373.2	1372.5	1371.7	1371.0	1370.2
10°	1353.2	1354.1	1355.1	1355.1	1354.1	1353.2	1352.2	1351.3
12.5°	1332.7	1333.2	1333.8	1333.4	1332.1	1330.8	1329.4	1328.1
15°	1296.7	1296.2	1295.7	1294.6	1292.9	1291.2	1289.6	1287.9
17.5°	1253.2	1251.9	1250.5	1248.6	1246.1	1243.5	1241.0	1238.5
20°	1222.8	1220.9	1219.0	1216.6	1213.5	1210.3	1207.2	1204.2
22.5°	1189.2	1186.3	1183.5	1180.7	1178.2	1175.7	1173.2	1170.6
25°	1134.8	1130.7	1126.7	1123.5	1121.1	1118.7	1116.3	1113.9
27.5°	1079.3	1074.4	1069.3	1065.1	1061.7	1058.2	1054.8	1051.4
30°	1039.7	1033.7	1027.7	1022.8	1019.1	1015.2	1011.4	1007.5
32.5°	999.1	992.2	985.2	980.0	976.3	972.7	969.1	965.4
35°	938.7	930.6	922.5	916.3	912.0	907.7	903.3	899.1
37.5°	873.8	864.7	855.7	849.0	844.8	840.4	836.2	831.8
40°	830.7	820.6	810.6	803.4	799.2	794.9	790.6	786.3
42.5°	788.2	778.0	767.8	760.4	755.9	751.4	747.0	742.5
45°	723.2	711.4	699.7	691.8	687.4	683.2	678.8	674.6
47.5°	657.6	645.5	633.4	624.9	620.3	615.5	610.8	606.0
50°	614.2	602.3	590.3	582.1	577.5	573.0	568.5	563.9
52.5°	570.9	558.8	546.5	538.2	533.4	528.7	524.0	519.3
55°	506.9	494.4	482.1	473.6	469.1	464.5	460.0	455.4
57.5°	444.4	431.8	419.2	411.2	407.8	404.3	400.9	397.5
60°	402.7	390.3	377.9	369.7	366.0	362.1	358.3	354.5
62.5°	361.6	350.2	338.7	331.4	328.4	325.4	322.2	319.2
65°	302.8	292.6	282.3	275.7	272.9	269.9	267.1	264.3
67.5°	248.7	239.9	231.1	225.1	222.0	218.7	215.6	212.5
70°	212.0	204.1	196.2	191.1	188.7	186.3	183.9	181.6
72.5°	179.0	172.3	165.5	161.1	159.0	156.7	154.5	152.3
75°	131.9	126.4	120.9	117.4	116.0	114.6	113.1	111.7
77.5°	93.3	90.1	86.8	85.0	84.6	84.2	83.8	83.3
80°	71.6	70.9	70.2	69.7	69.5	69.2	69.0	68.8
82.5°	55.6	55.1	54.6	54.2	54.0	53.7	53.5	53.3
85°	32.3	31.9	31.4	31.1	31.1	31.1	31.1	31.1
87.5°	13.9	13.8	13.7	13.8	14.0	14.3	14.5	14.7
90°	11.3	11.9	12.5	12.9	13.1	13.3	13.5	13.7
92.5°	10.9	11.5	12.1	12.4	12.5	12.5	12.6	12.6
95°	11.3	11.9	12.5	12.8	12.9	13.0	13.1	13.2
97.5°	12.2	12.2	12.3	12.4	12.5	12.6	12.7	12.8
100°	16.7	14.9	13.2	12.4	12.5	12.6	12.7	12.8
102.5°	59.7	41.1	22.4	13.1	13.1	13.1	13.1	13.2
105°	144.6	145.5	146.4	145.1	141.4	137.7	134.1	130.5
107.5°	178.9	179.4	179.9	180.3	180.7	181.0	181.4	181.8
110°	202.3	202.5	202.7	202.9	203.2	203.5	203.8	204.1



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CATALOG NUMBER: S124RDIW-S795D470U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	224.8	224.8	224.7	224.9	225.3	225.7	226.1	226.4
115°	258.5	258.7	258.9	259.0	259.0	259.0	259.0	259.0
117.5°	292.5	292.5	292.4	292.4	292.3	292.3	292.3	292.2
120°	313.5	313.7	313.9	313.9	313.7	313.5	313.3	313.1
122.5°	334.2	334.3	334.4	334.4	334.2	334.0	333.8	333.6
125°	363.0	363.3	363.7	363.9	364.0	364.1	364.2	364.3
127.5°	391.8	391.7	391.7	391.6	391.5	391.4	391.4	391.3
130°	409.4	409.5	409.6	409.6	409.6	409.6	409.6	409.6
132.5°	426.6	426.7	426.8	426.8	426.7	426.7	426.6	426.5
135°	450.3	450.5	450.7	450.9	451.1	451.3	451.5	451.7
137.5°	473.0	473.2	473.5	473.5	473.5	473.4	473.4	473.3
140°	487.2	487.5	487.8	488.0	488.1	488.2	488.3	488.4
142.5°	500.1	500.4	500.6	500.7	500.7	500.8	500.8	500.8
145°	518.8	518.9	519.0	519.1	519.3	519.5	519.7	519.9
147.5°	535.1	535.1	535.2	535.3	535.4	535.5	535.6	535.7
150°	545.5	545.5	545.5	545.6	545.7	545.8	545.9	546.0
152.5°	554.6	554.8	555.0	555.0	555.0	554.9	554.8	554.8
155°	566.9	567.3	567.7	567.8	567.5	567.2	566.9	566.6
157.5°	577.5	578.0	578.6	578.6	578.0	577.5	577.0	576.5
160°	584.3	584.9	585.5	585.5	584.9	584.3	583.7	583.1
162.5°	589.8	590.4	591.0	591.0	590.3	589.6	588.9	588.2
165°	597.5	598.3	599.2	599.1	598.1	597.2	596.3	595.4
167.5°	603.2	604.1	605.0	604.9	603.9	602.9	601.9	600.9
170°	606.6	607.4	608.3	608.2	607.1	606.1	605.1	604.1
172.5°	608.8	609.7	610.5	610.4	609.3	608.1	607.0	605.9
175°	611.5	612.4	613.3	613.1	611.9	610.7	609.5	608.2
177.5°	612.5	613.1	613.8	613.6	612.7	611.7	610.7	609.8
180°	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9

(END OF REPORT)