

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: P333062-930

Luminaire Tested: **S124RDIW-S795D770U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333062-930
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-S795D770U930-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4789.8 lumens
Efficiency: N/A
Efficacy: 106.4 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

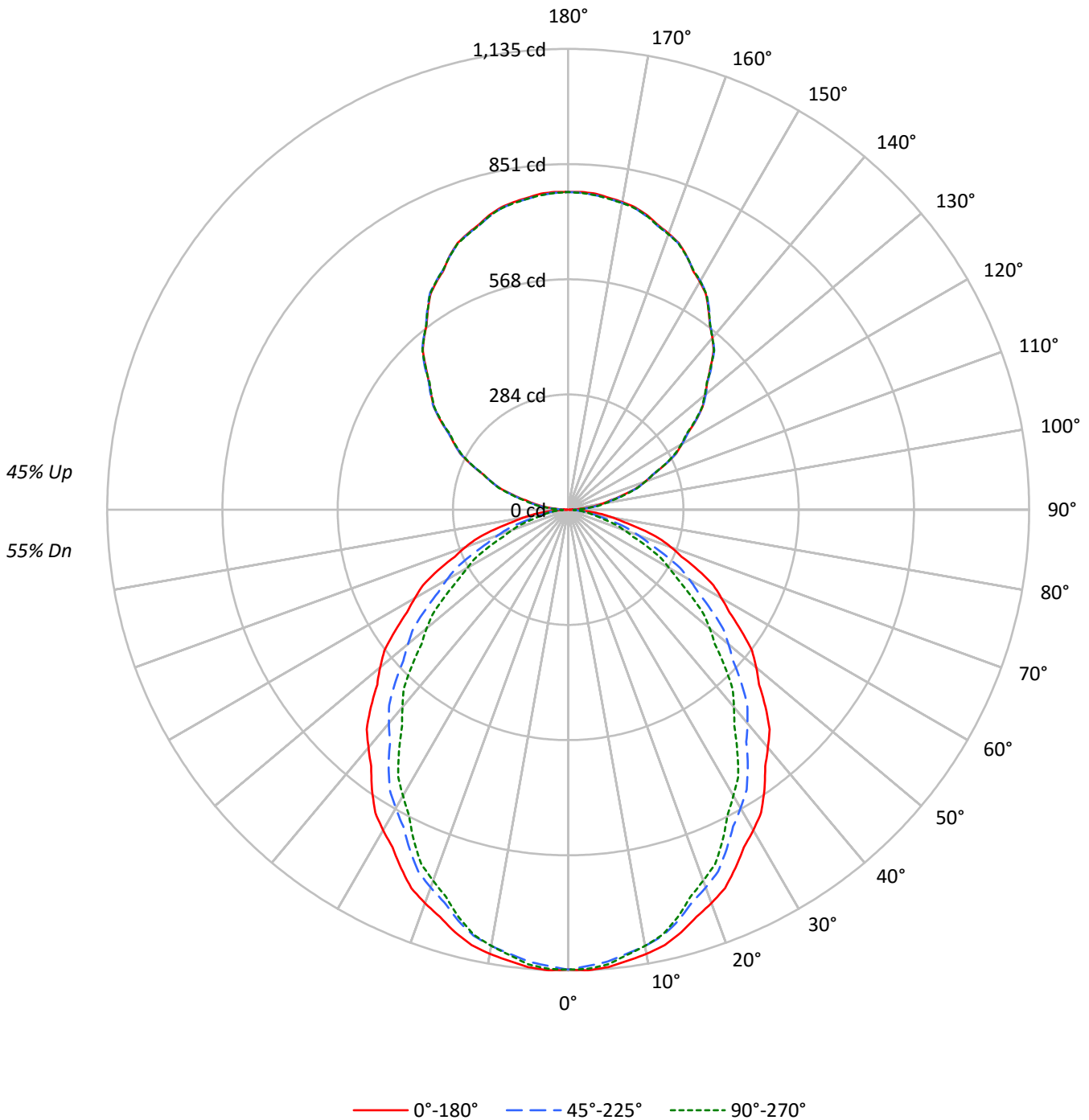
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	86	86	86	73	73	73	60	60	60	55
1	99	95	91	88	92	88	85	82	76	73	71	64	63	61	54	53	52	47
2	90	83	77	72	84	77	72	68	67	63	59	57	54	51	48	46	44	40
3	83	73	66	60	77	68	62	57	59	54	50	51	47	44	43	40	38	34
4	76	65	57	51	70	61	54	49	53	47	43	45	41	38	38	35	33	29
5	70	58	50	44	65	54	47	42	47	42	37	41	36	33	35	31	29	26
6	64	52	44	38	60	49	42	37	43	37	33	37	32	29	31	28	25	23
7	60	47	39	34	55	44	37	32	39	33	29	34	29	26	29	25	23	20
8	55	43	35	30	51	40	33	29	35	30	26	31	26	23	26	23	20	18
9	52	39	32	27	48	37	30	26	33	27	23	28	24	21	24	21	18	16
10	48	36	29	24	45	34	28	23	30	25	21	26	22	19	23	19	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9143	9143	9143
5°	9164	9052	9108
10°	9107	8943	8943
15°	9002	8756	8690
20°	8858	8508	8352
25°	8675	8219	8011
30°	8496	7914	7582
35°	8298	7597	7154
40°	8061	7238	6690
45°	7841	6882	6218
50°	7592	6469	5718
55°	7323	6042	5175
60°	7030	5572	4621
65°	6758	4988	4076
70°	6366	4338	3460
75°	5870	3599	2813
80°	5119	2738	2580
85°	4335	2492	2325



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.4	2.2
10°-20°	296.7	6.2
20°-30°	428.4	8.9
30°-40°	485.6	10.1
40°-50°	468.9	9.8
50°-60°	389.9	8.1
60°-70°	269.3	5.6
70°-80°	136.5	2.8
80°-90°	37.3	0.8
90°-100°	51.6	1.1
100°-110°	152.9	3.2
110°-120°	259.5	5.4
120°-130°	342.1	7.1
130°-140°	384.2	8.0
140°-150°	377.6	7.9
150°-160°	317.6	6.6
160°-170°	211.3	4.4
170°-180°	74.0	1.5
0°-30°	831.5	17.4
0°-40°	1317.1	27.5
0°-60°	2176.0	45.4
0°-90°	2619.1	54.7
90°-120°	463.9	9.7
90°-150°	1567.9	32.7
90°-180°	2171.0	45.3
0°-180°	4789.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1133	1133	1133	1133	1133	
5°	1131	1127	1117	1125	1124	107
15°	1077	1069	1048	1046	1040	303
25°	974	957	923	908	899	449
35°	842	813	771	742	726	526
45°	687	654	603	562	545	529
55°	520	484	429	386	368	465
65°	354	316	261	225	213	349
75°	188	156	115	96	90	199
85°	47	30	27	25	25	53
90°	2	8	13	17	18	5
95°	36	42	46	48	48	40
105°	141	142	144	146	148	150
115°	264	264	263	262	261	260
125°	384	384	384	382	381	342
135°	496	499	499	498	496	383
145°	602	604	605	604	603	377
155°	690	690	689	691	689	317
165°	751	749	748	751	749	212
175°	781	778	778	781	778	74
180°	782	782	782	782	782	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6
2.5°	1135.4	1134.7	1134.1	1133.5	1132.9	1131.7	1130.0	1128.4	1126.7	1124.9	1126.7
5°	1130.8	1130.1	1129.3	1128.5	1127.7	1126.3	1123.9	1121.6	1119.2	1117.0	1118.9
7.5°	1120.6	1119.8	1119.0	1118.2	1117.4	1115.5	1112.5	1109.5	1106.4	1103.4	1104.6
10°	1110.9	1109.9	1109.0	1108.0	1107.0	1104.8	1101.4	1097.9	1094.5	1091.0	1091.7
12.5°	1098.4	1097.3	1096.2	1095.0	1094.0	1091.4	1087.3	1083.1	1079.0	1075.0	1075.5
15°	1077.1	1075.4	1073.6	1071.9	1070.2	1066.9	1062.0	1057.2	1052.4	1047.6	1047.2
17.5°	1051.2	1048.7	1046.2	1043.7	1041.2	1037.1	1031.3	1025.5	1019.7	1013.9	1012.8
20°	1031.1	1028.6	1026.1	1023.6	1021.1	1016.6	1010.0	1003.5	996.9	990.3	988.8
22.5°	1008.9	1006.1	1003.3	1000.5	997.7	992.7	985.7	978.7	971.7	964.7	962.4
25°	973.9	970.4	966.9	963.4	960.0	954.3	946.4	938.5	930.6	922.7	919.4
27.5°	937.1	932.8	928.4	924.1	919.7	913.3	904.8	896.4	887.9	879.5	875.5
30°	911.4	906.6	901.8	897.0	892.2	885.3	876.2	867.2	858.0	849.0	844.2
32.5°	884.4	879.0	873.5	868.0	862.7	855.2	845.9	836.5	827.1	817.7	812.2
35°	842.0	835.9	829.7	823.5	817.4	809.5	799.9	790.2	780.6	770.9	764.4
37.5°	796.8	790.4	784.1	777.7	771.4	762.9	752.2	741.5	730.8	720.2	712.8
40°	764.9	758.6	752.2	745.8	739.5	730.8	719.7	708.8	697.8	686.8	678.7
42.5°	734.3	727.7	721.1	714.4	707.7	698.6	687.2	675.7	664.3	652.8	644.6
45°	686.8	679.7	672.5	665.4	658.3	649.0	637.4	625.8	614.2	602.8	593.3
47.5°	637.7	630.4	623.1	615.6	608.3	598.6	586.6	574.5	562.6	550.5	540.7
50°	604.5	597.0	589.4	581.9	574.4	564.4	552.1	539.8	527.4	515.1	505.5
52.5°	570.5	563.1	555.7	548.4	541.0	531.0	518.4	505.7	493.1	480.5	470.7
55°	520.3	512.6	504.9	497.2	489.5	479.4	466.8	454.3	441.8	429.3	419.2
57.5°	470.8	462.7	454.7	446.7	438.6	428.4	416.1	403.8	391.5	379.1	369.0
60°	435.4	427.6	420.0	412.2	404.5	394.5	382.1	369.8	357.5	345.1	335.1
62.5°	403.4	395.4	387.4	379.4	371.4	361.0	348.4	335.7	323.1	310.5	301.2
65°	353.8	345.5	337.2	329.0	320.7	310.4	298.0	285.7	273.4	261.1	252.7
67.5°	302.3	294.4	286.4	278.5	270.5	260.9	249.4	238.0	226.5	215.1	207.9
70°	269.7	261.6	253.5	245.4	237.3	227.8	216.8	205.8	194.9	183.8	177.5
72.5°	235.1	227.7	220.4	213.0	205.7	196.9	186.5	176.1	165.8	155.4	149.9
75°	188.2	181.1	173.9	166.8	159.6	151.6	142.5	133.5	124.4	115.4	110.9
77.5°	140.6	134.6	128.6	122.5	116.4	109.7	102.5	95.1	87.8	80.5	77.9
80°	110.1	104.5	99.0	93.4	87.8	82.1	76.3	70.5	64.7	58.9	58.4
82.5°	83.8	78.7	73.5	68.4	63.3	59.0	55.8	52.4	49.1	45.8	45.3
85°	46.8	43.0	39.1	35.3	31.4	29.2	28.6	28.0	27.5	26.9	26.5
87.5°	16.3	15.4	14.4	13.5	12.6	12.1	12.2	12.2	12.3	12.4	12.4
90°	1.8	3.3	4.8	6.3	7.7	9.0	10.1	11.2	12.2	13.3	14.1
92.5°	13.0	14.7	16.3	18.0	19.7	21.0	21.7	22.4	23.2	24.0	24.5
95°	36.3	37.5	38.7	39.9	41.2	42.2	43.1	44.1	45.1	46.0	46.4
97.5°	63.4	64.4	65.4	66.3	67.3	68.3	69.5	70.5	71.7	72.7	73.2
100°	84.7	85.3	85.8	86.3	86.8	87.7	88.9	90.2	91.4	92.6	92.9
102.5°	107.0	107.2	107.4	107.6	107.9	108.5	109.6	110.7	111.8	112.9	113.3
105°	141.0	141.1	141.3	141.4	141.5	141.9	142.4	142.9	143.5	144.0	144.4
107.5°	176.7	176.8	177.0	177.2	177.3	177.5	177.6	177.7	177.7	177.8	178.1
110°	200.9	201.1	201.5	201.7	201.9	202.0	201.9	201.8	201.6	201.5	201.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	226.1	226.1	226.2	226.2	226.2	226.2	225.9	225.7	225.4	225.2	225.2
115°	263.8	263.8	263.8	263.8	263.8	263.7	263.4	263.2	262.9	262.6	262.4
117.5°	299.4	299.5	299.6	299.7	299.9	299.8	299.6	299.5	299.2	299.1	298.6
120°	323.1	323.7	324.2	324.7	325.3	325.3	325.0	324.6	324.2	323.8	323.0
122.5°	347.8	348.1	348.2	348.5	348.7	348.7	348.5	348.3	348.1	348.0	347.5
125°	384.3	384.3	384.3	384.3	384.3	384.2	384.0	383.9	383.8	383.6	383.4
127.5°	417.3	417.7	418.1	418.5	418.9	419.0	418.7	418.6	418.3	418.2	417.8
130°	440.5	440.9	441.3	441.7	442.1	442.3	442.3	442.3	442.3	442.3	442.1
132.5°	464.2	464.6	464.8	465.1	465.5	465.5	465.4	465.3	465.2	465.0	464.8
135°	495.6	496.4	497.2	498.0	498.8	499.2	499.2	499.2	499.2	499.2	499.0
137.5°	529.7	530.1	530.4	530.8	531.2	531.5	531.7	531.9	532.1	532.4	532.0
140°	552.4	552.7	553.0	553.3	553.5	553.7	553.7	553.7	553.7	553.7	553.5
142.5°	573.2	573.6	573.8	574.1	574.4	574.5	574.3	574.2	574.1	574.0	574.0
145°	602.1	602.6	603.2	603.7	604.2	604.5	604.7	604.9	605.0	605.1	605.0
147.5°	630.6	631.3	631.9	632.6	633.2	633.5	633.4	633.2	633.2	633.1	632.9
150°	648.1	648.6	649.1	649.7	650.2	650.5	650.5	650.5	650.5	650.5	650.5
152.5°	664.6	664.9	665.2	665.5	665.9	666.0	666.1	666.3	666.3	666.4	666.8
155°	689.8	689.8	689.8	689.8	689.8	689.7	689.6	689.5	689.3	689.3	689.7
157.5°	711.1	710.9	710.6	710.4	710.1	710.0	710.0	710.0	710.0	709.9	710.3
160°	723.7	723.6	723.4	723.3	723.2	723.0	722.9	722.8	722.6	722.5	722.9
162.5°	735.3	735.0	734.6	734.3	733.9	733.7	733.5	733.4	733.3	733.1	733.9
165°	751.0	750.6	750.2	749.7	749.3	749.0	748.7	748.4	748.2	747.9	748.7
167.5°	762.9	762.4	761.8	761.2	760.7	760.3	760.4	760.4	760.4	760.5	761.3
170°	769.7	769.0	768.3	767.7	767.0	766.7	766.9	767.0	767.1	767.3	768.1
172.5°	774.5	774.0	773.4	772.8	772.3	772.0	772.0	772.1	772.1	772.1	773.1
175°	781.2	780.5	779.8	779.2	778.5	778.1	778.0	777.8	777.7	777.6	778.5
177.5°	783.3	782.9	782.3	781.8	781.2	781.0	781.0	781.0	781.0	781.0	781.7
180°	782.4	782.4	782.4	782.4	782.4	782.4	782.4	782.4	782.4	782.4	782.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6
2.5°	1128.4	1130.0	1131.7	1132.5	1132.4	1132.2	1132.0	1131.9
5°	1120.8	1122.7	1124.7	1125.4	1125.0	1124.7	1124.3	1123.9
7.5°	1105.9	1107.2	1108.4	1108.6	1108.1	1107.4	1106.9	1106.2
10°	1092.5	1093.2	1094.1	1094.1	1093.2	1092.5	1091.7	1091.0
12.5°	1076.0	1076.4	1076.8	1076.5	1075.5	1074.4	1073.3	1072.2
15°	1046.8	1046.4	1046.0	1045.2	1043.8	1042.4	1041.1	1039.8
17.5°	1011.8	1010.7	1009.6	1008.0	1006.0	1004.0	1001.9	999.9
20°	987.2	985.7	984.1	982.2	979.7	977.1	974.6	972.2
22.5°	960.1	957.7	955.4	953.2	951.2	949.2	947.1	945.1
25°	916.2	912.9	909.6	907.0	905.1	903.2	901.2	899.3
27.5°	871.4	867.4	863.3	859.9	857.1	854.4	851.6	848.8
30°	839.4	834.5	829.7	825.7	822.7	819.6	816.5	813.4
32.5°	806.6	801.0	795.4	791.2	788.2	785.3	782.4	779.4
35°	757.8	751.3	744.8	739.7	736.3	732.8	729.3	725.9
37.5°	705.5	698.1	690.8	685.4	682.0	678.5	675.1	671.6
40°	670.7	662.5	654.4	648.7	645.2	641.7	638.3	634.8
42.5°	636.3	628.1	619.9	613.9	610.3	606.7	603.1	599.4
45°	583.8	574.4	564.9	558.5	555.0	551.5	548.0	544.6
47.5°	530.9	521.1	511.4	504.5	500.8	496.9	493.1	489.3
50°	495.9	486.2	476.5	469.9	466.3	462.6	458.9	455.3
52.5°	460.9	451.1	441.2	434.5	430.6	426.8	423.1	419.2
55°	409.2	399.2	389.2	382.4	378.7	375.0	371.4	367.7
57.5°	358.8	348.6	338.4	332.0	329.2	326.4	323.7	320.9
60°	325.1	315.1	305.1	298.5	295.5	292.4	289.3	286.2
62.5°	292.0	282.7	273.5	267.6	265.1	262.7	260.2	257.7
65°	244.4	236.2	227.9	222.6	220.3	217.9	215.6	213.4
67.5°	200.8	193.7	186.5	181.7	179.2	176.6	174.1	171.5
70°	171.1	164.8	158.4	154.3	152.4	150.4	148.5	146.6
72.5°	144.6	139.1	133.6	130.0	128.3	126.5	124.7	122.9
75°	106.5	102.1	97.6	94.8	93.7	92.5	91.3	90.2
77.5°	75.3	72.7	70.1	68.6	68.3	68.0	67.7	67.3
80°	57.8	57.2	56.7	56.3	56.1	55.8	55.7	55.5
82.5°	44.9	44.5	44.1	43.8	43.6	43.4	43.2	43.0
85°	26.1	25.8	25.4	25.1	25.1	25.1	25.1	25.1
87.5°	12.4	12.4	12.4	12.5	12.7	13.0	13.1	13.4
90°	14.9	15.7	16.6	17.0	17.4	17.6	17.9	18.2
92.5°	24.9	25.4	25.9	26.3	26.4	26.6	26.7	26.9
95°	46.8	47.2	47.6	47.8	47.8	47.8	47.8	47.8
97.5°	73.7	74.2	74.7	74.9	74.9	74.9	74.9	74.9
100°	93.1	93.4	93.7	93.8	93.8	93.8	93.8	93.8
102.5°	113.7	114.1	114.4	114.6	114.8	114.9	115.0	115.1
105°	144.8	145.2	145.6	146.0	146.4	146.8	147.2	147.7
107.5°	178.6	178.9	179.3	179.4	179.4	179.4	179.4	179.4
110°	201.0	200.7	200.4	200.5	200.9	201.3	201.7	202.1



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CATALOG NUMBER: S124RDIW-S795D770U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	225.1	225.0	225.0	225.0	225.1	225.2	225.3	225.3
115°	262.4	262.2	262.0	262.0	261.8	261.7	261.5	261.4
117.5°	298.2	297.7	297.2	296.9	296.6	296.3	296.0	295.8
120°	322.4	321.7	321.1	320.8	321.1	321.4	321.6	321.9
122.5°	347.0	346.6	346.1	345.6	345.1	344.6	344.2	343.7
125°	383.1	382.9	382.5	382.3	382.0	381.7	381.5	381.2
127.5°	417.6	417.4	417.0	416.8	416.6	416.4	416.1	416.0
130°	441.8	441.5	441.2	440.8	440.3	439.8	439.2	438.7
132.5°	464.6	464.3	464.0	463.7	463.6	463.3	463.1	462.9
135°	498.6	498.4	498.1	497.8	497.4	497.0	496.6	496.2
137.5°	531.7	531.3	531.0	530.8	530.9	531.0	531.1	531.2
140°	553.4	553.3	553.1	553.0	552.9	552.7	552.6	552.4
142.5°	574.0	573.9	573.9	573.9	573.8	573.8	573.8	573.7
145°	604.9	604.7	604.5	604.3	603.9	603.5	603.1	602.7
147.5°	632.8	632.8	632.6	632.5	632.3	632.3	632.1	631.9
150°	650.5	650.5	650.5	650.4	650.3	650.1	650.0	649.9
152.5°	667.1	667.4	667.7	667.7	667.4	667.1	666.7	666.3
155°	690.3	690.8	691.4	691.4	690.8	690.3	689.7	689.3
157.5°	710.7	711.1	711.5	711.5	711.0	710.6	710.1	709.6
160°	723.3	723.7	724.1	724.0	723.3	722.6	721.9	721.3
162.5°	734.6	735.3	736.1	736.1	735.4	734.7	734.1	733.4
165°	749.5	750.3	751.1	751.3	750.7	750.2	749.7	749.1
167.5°	762.1	762.9	763.7	763.7	762.9	762.1	761.2	760.3
170°	768.9	769.7	770.5	770.5	769.5	768.6	767.6	766.7
172.5°	774.0	774.9	775.8	775.8	774.8	773.9	772.9	772.0
175°	779.4	780.4	781.3	781.3	780.4	779.4	778.5	777.6
177.5°	782.4	783.2	784.0	783.9	783.0	782.2	781.3	780.5
180°	782.4	782.4	782.4	782.4	782.4	782.4	782.4	782.4

(END OF REPORT)