

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: P332436-930

Luminaire Tested: **S123RDIW-S775D755U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332436-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIW-S775D755U930-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4842.7 lumens
Efficiency: N/A
Efficacy: 107.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

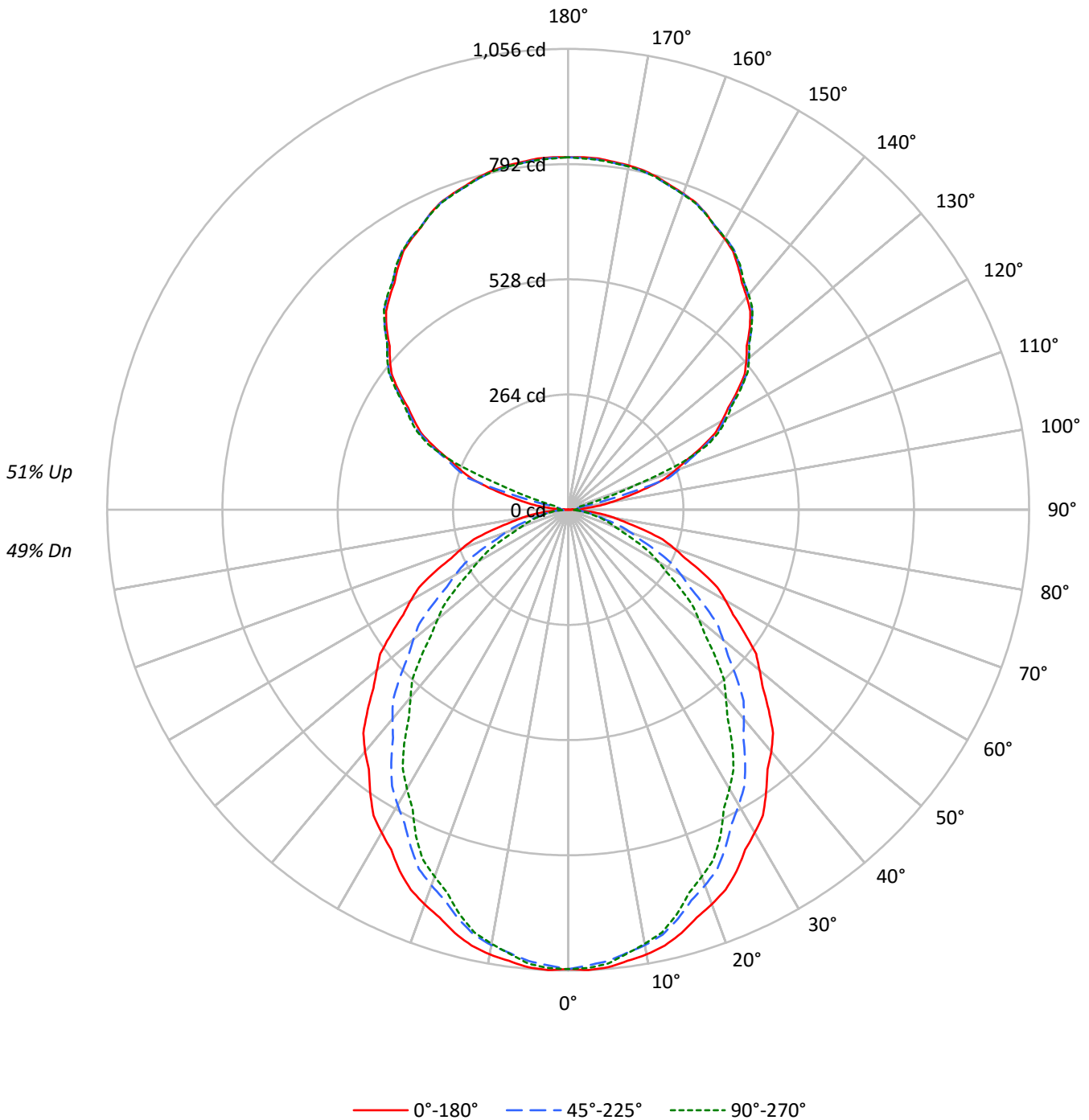
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83		69	69	69		55	55	55	49
1	98	94	90	87	90	87	83	80	73	71	69		61	59	58		49	48	47	42
2	89	82	76	71	82	76	71	66	64	61	57		54	51	49		44	42	40	36
3	82	73	65	60	75	67	61	56	57	52	49		48	44	42		39	37	35	31
4	75	64	57	51	69	60	53	48	51	46	42		43	39	36		35	32	30	27
5	69	57	49	44	63	53	46	41	46	40	36		38	34	31		32	29	26	23
6	64	52	44	38	58	48	41	36	41	36	32		35	31	27		29	26	23	21
7	59	47	39	33	54	44	37	32	37	32	28		32	28	24		26	23	21	18
8	55	42	35	30	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	48	36	28	24	44	33	27	23	29	24	20		25	21	18		21	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11330	11330	11330
5°	11373	11217	11282
10°	11309	11075	11038
15°	11188	10816	10702
20°	11021	10493	10247
25°	10849	10128	9804
30°	10621	9708	9178
35°	10387	9289	8604
40°	10172	8792	7893
45°	9889	8304	7252
50°	9577	7748	6532
55°	9259	7112	5863
60°	8968	6433	5126
65°	8588	5695	4391
70°	8113	4784	3547
75°	7419	3764	3335
80°	6614	3335	3068
85°	5582	2952	2742



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.8	2.0
10°-20°	275.0	5.7
20°-30°	396.0	8.2
30°-40°	446.1	9.2
40°-50°	426.7	8.8
50°-60°	349.5	7.2
60°-70°	235.8	4.9
70°-80°	118.6	2.4
80°-90°	33.6	0.7
90°-100°	29.4	0.6
100°-110°	139.9	2.9
110°-120°	336.1	6.9
120°-130°	428.0	8.8
130°-140°	457.3	9.4
140°-150°	427.6	8.8
150°-160°	344.9	7.1
160°-170°	222.6	4.6
170°-180°	76.7	1.6
0°-30°	769.9	15.9
0°-40°	1215.9	25.1
0°-60°	1992.1	41.1
0°-90°	2380.2	49.1
90°-120°	505.4	10.4
90°-150°	1818.3	37.5
90°-180°	2463.0	50.9
0°-180°	4842.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1053	1053	1053	1053	1053	
5°	1053	1048	1038	1045	1044	100
15°	1004	994	971	966	960	283
25°	914	891	853	835	826	420
35°	790	759	707	671	655	495
45°	650	610	546	498	476	501
55°	493	450	379	331	312	442
65°	337	289	224	184	172	334
75°	178	137	90	82	80	190
85°	45	27	24	22	22	51
90°	1	7	14	17	18	4
95°	37	14	19	23	23	45
105°	179	182	131	31	26	190
115°	335	339	344	350	353	331
125°	473	477	480	481	482	422
135°	589	592	594	596	594	453
145°	679	683	684	686	686	425
155°	748	747	748	750	747	345
165°	789	787	786	791	787	223
175°	808	805	805	809	804	77
180°	808	808	808	808	808	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6
2.5°	1056.0	1055.4	1054.8	1054.2	1053.6	1052.4	1050.5	1048.7	1046.9	1045.1	1046.8
5°	1052.6	1051.7	1050.7	1049.8	1048.8	1047.2	1044.9	1042.6	1040.3	1038.1	1039.8
7.5°	1042.8	1041.9	1040.8	1039.8	1038.8	1036.7	1033.8	1030.9	1027.9	1024.9	1025.9
10°	1034.7	1033.3	1032.0	1030.7	1029.3	1027.0	1023.5	1020.2	1016.8	1013.3	1013.5
12.5°	1023.0	1021.6	1020.1	1018.6	1017.2	1014.3	1010.2	1006.0	1001.8	997.6	997.5
15°	1004.0	1001.8	999.7	997.7	995.6	991.9	986.6	981.3	975.9	970.6	969.7
17.5°	979.8	977.5	975.0	972.6	970.1	965.6	958.8	952.0	945.3	938.6	936.5
20°	962.1	959.0	956.0	953.0	950.0	944.9	937.6	930.4	923.2	916.0	913.5
22.5°	942.3	938.8	935.3	931.8	928.3	922.8	915.1	907.4	899.8	892.1	889.0
25°	913.5	908.7	903.9	899.2	894.5	887.7	879.0	870.3	861.5	852.8	848.8
27.5°	878.4	873.2	868.0	862.7	857.5	850.0	840.3	830.6	820.8	811.1	805.6
30°	854.5	848.8	843.2	837.5	831.8	823.6	813.0	802.3	791.7	781.1	774.7
32.5°	830.6	824.2	817.7	811.3	804.9	796.0	784.7	773.6	762.3	751.1	744.0
35°	790.5	783.7	776.8	770.1	763.2	753.9	742.2	730.3	718.6	706.9	698.7
37.5°	749.9	742.2	734.7	727.1	719.5	709.5	696.9	684.4	671.8	659.3	650.0
40°	723.9	715.6	707.2	698.9	690.6	679.6	666.2	652.7	639.2	625.7	615.9
42.5°	694.6	686.2	677.8	669.5	661.2	650.0	636.1	622.2	608.3	594.4	583.6
45°	649.6	641.2	632.6	624.0	615.5	604.0	589.3	574.7	560.1	545.5	534.7
47.5°	604.8	595.4	586.0	576.7	567.3	555.3	540.7	526.0	511.4	496.8	485.1
50°	571.9	563.0	554.2	545.2	536.3	524.2	508.8	493.4	478.1	462.7	450.9
52.5°	542.6	533.0	523.3	513.6	503.9	491.5	476.2	461.1	445.8	430.6	418.4
55°	493.4	484.1	474.8	465.5	456.2	443.5	427.4	411.3	395.2	379.0	368.0
57.5°	448.0	437.9	427.8	417.6	407.5	394.4	378.1	361.9	345.7	329.5	319.1
60°	416.6	406.2	395.7	385.3	374.9	361.7	346.0	330.3	314.5	298.8	288.5
62.5°	385.1	374.7	364.3	353.8	343.5	330.4	314.6	298.9	283.2	267.3	257.7
65°	337.2	326.8	316.3	305.9	295.5	282.8	268.1	253.2	238.5	223.6	214.3
67.5°	289.3	278.7	268.2	257.6	247.0	234.6	220.5	206.3	192.1	177.9	171.0
70°	257.8	247.6	237.3	227.1	216.9	205.0	191.8	178.6	165.3	152.0	145.3
72.5°	226.4	216.3	206.2	196.1	186.1	175.0	162.9	150.8	138.8	126.7	121.2
75°	178.4	169.3	160.2	151.1	142.0	132.2	121.8	111.4	100.9	90.5	88.6
77.5°	134.7	126.5	118.2	110.0	101.7	94.3	87.6	80.9	74.2	67.4	66.4
80°	106.7	98.9	91.2	83.4	75.6	69.7	65.7	61.7	57.8	53.8	53.2
82.5°	80.1	73.4	66.6	59.9	53.2	48.9	47.0	45.2	43.4	41.5	40.9
85°	45.2	41.1	36.9	32.7	28.5	26.2	25.6	25.0	24.5	23.9	23.6
87.5°	16.6	15.1	13.7	12.3	10.9	10.4	10.7	11.1	11.4	11.7	11.7
90°	0.6	2.0	3.3	4.6	6.0	7.5	9.2	10.9	12.6	14.4	14.9
92.5°	11.2	10.8	10.4	10.0	9.7	10.1	11.4	12.7	14.0	15.3	16.2
95°	36.6	31.1	25.7	20.2	14.8	12.7	14.2	15.7	17.1	18.6	19.6
97.5°	73.5	71.1	68.6	66.2	63.8	57.7	48.1	38.5	28.9	19.3	20.4
100°	101.4	104.0	106.7	109.4	112.0	103.0	82.2	61.4	40.6	19.8	20.9
102.5°	133.1	135.0	136.9	138.8	140.7	130.4	107.6	84.9	62.2	39.5	36.2
105°	178.8	180.3	181.7	183.2	184.7	179.4	167.4	155.4	143.4	131.4	107.8
107.5°	227.0	228.2	229.3	230.6	231.7	233.3	235.1	237.0	239.0	240.8	223.5
110°	259.2	260.2	261.3	262.4	263.4	264.7	266.2	267.7	269.1	270.6	266.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	289.9	290.8	291.8	292.8	293.8	295.0	296.4	297.9	299.4	300.8	300.9
115°	335.3	336.1	337.0	337.8	338.6	339.6	340.8	341.9	343.2	344.4	345.7
117.5°	379.4	380.4	381.4	382.4	383.4	384.2	384.7	385.4	386.0	386.6	387.7
120°	406.8	408.0	409.2	410.3	411.6	412.4	412.8	413.2	413.6	413.9	415.1
122.5°	434.6	435.6	436.6	437.6	438.5	439.3	439.8	440.3	440.8	441.3	442.1
125°	472.8	473.9	474.9	476.0	477.0	477.8	478.3	478.9	479.4	480.0	480.2
127.5°	509.7	510.8	511.8	512.9	514.0	514.9	515.5	516.1	516.7	517.4	517.8
130°	532.7	533.9	534.9	536.0	537.0	537.9	538.3	538.9	539.4	540.0	540.5
132.5°	554.8	555.9	556.9	558.0	559.1	559.9	560.3	560.7	561.1	561.6	562.1
135°	588.6	589.4	590.1	590.9	591.7	592.4	593.0	593.5	594.0	594.5	594.9
137.5°	617.3	618.3	619.4	620.4	621.4	622.1	622.3	622.6	623.0	623.2	623.9
140°	636.5	637.3	638.1	639.0	639.8	640.3	640.7	641.2	641.6	642.0	642.5
142.5°	654.3	655.1	655.9	656.7	657.5	658.1	658.5	658.9	659.3	659.7	660.1
145°	679.1	680.0	681.0	681.9	682.9	683.5	683.7	684.0	684.3	684.5	684.8
147.5°	702.5	703.1	703.8	704.3	705.0	705.4	705.7	706.0	706.2	706.5	706.8
150°	717.0	717.3	717.7	718.1	718.5	718.8	719.2	719.4	719.7	719.9	720.2
152.5°	729.9	730.1	730.3	730.4	730.7	730.8	731.0	731.2	731.3	731.5	731.9
155°	748.1	747.9	747.6	747.3	747.1	747.0	747.1	747.3	747.4	747.5	748.2
157.5°	762.3	762.3	762.2	762.2	762.2	762.1	762.0	761.8	761.7	761.6	762.4
160°	770.9	770.8	770.7	770.5	770.4	770.3	770.1	770.0	769.9	769.7	770.5
162.5°	779.1	778.8	778.4	778.0	777.7	777.5	777.3	777.2	777.1	776.9	777.9
165°	789.0	788.6	788.1	787.7	787.3	787.1	786.9	786.8	786.7	786.5	787.6
167.5°	796.6	796.1	795.6	795.0	794.5	794.2	794.2	794.2	794.2	794.2	795.2
170°	801.0	800.4	799.9	799.3	798.8	798.5	798.5	798.5	798.5	798.5	799.6
172.5°	803.8	803.2	802.5	801.9	801.3	801.0	801.1	801.2	801.3	801.4	802.5
175°	807.6	806.8	806.2	805.5	804.9	804.6	804.7	804.9	805.0	805.1	806.1
177.5°	808.5	808.0	807.4	806.9	806.3	806.2	806.2	806.3	806.5	806.6	807.4
180°	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6
2.5°	1048.4	1050.1	1051.7	1052.5	1052.1	1051.8	1051.5	1051.2
5°	1041.5	1043.2	1044.9	1045.5	1045.2	1044.8	1044.4	1044.1
7.5°	1026.9	1027.8	1028.7	1028.9	1028.3	1027.6	1027.0	1026.3
10°	1013.7	1013.9	1014.1	1013.7	1012.8	1011.8	1010.9	1009.9
12.5°	997.4	997.3	997.2	996.5	995.5	994.3	993.3	992.1
15°	968.7	967.8	966.9	965.7	964.4	963.0	961.7	960.4
17.5°	934.5	932.5	930.5	928.5	926.5	924.5	922.6	920.6
20°	911.1	908.6	906.1	903.8	901.5	899.2	896.9	894.6
22.5°	886.0	882.9	879.8	877.2	875.1	872.9	870.8	868.7
25°	844.9	840.9	836.9	833.9	831.8	829.6	827.6	825.5
27.5°	800.1	794.6	789.0	784.6	781.5	778.3	775.1	771.9
30°	768.3	761.7	755.3	750.6	747.5	744.5	741.4	738.4
32.5°	736.9	729.9	722.8	717.7	714.5	711.3	708.2	705.0
35°	690.6	682.4	674.3	668.5	665.0	661.6	658.2	654.8
37.5°	640.7	631.4	622.2	615.5	611.2	607.0	602.8	598.6
40°	606.0	596.1	586.3	579.2	574.8	570.5	566.1	561.7
42.5°	572.7	562.0	551.2	543.9	540.0	536.1	532.1	528.2
45°	523.9	513.1	502.2	494.6	490.0	485.4	480.9	476.4
47.5°	473.3	461.5	449.8	441.9	437.8	433.7	429.7	425.7
50°	439.2	427.4	415.6	407.6	403.2	398.8	394.5	390.1
52.5°	406.2	394.0	381.7	373.7	369.7	365.8	361.9	358.0
55°	357.0	346.0	335.0	327.6	323.8	320.0	316.3	312.4
57.5°	308.8	298.3	288.0	281.1	277.9	274.7	271.4	268.2
60°	278.3	268.1	257.8	251.1	247.9	244.6	241.4	238.1
62.5°	248.1	238.5	228.9	222.3	218.9	215.6	212.2	208.8
65°	205.0	195.8	186.5	180.8	178.7	176.6	174.6	172.4
67.5°	164.0	157.1	150.1	145.5	143.3	141.0	138.8	136.6
70°	138.7	132.0	125.4	121.1	119.0	116.8	114.8	112.7
72.5°	115.9	110.4	105.0	101.8	100.9	100.1	99.2	98.3
75°	86.7	84.8	82.9	81.8	81.4	81.0	80.6	80.2
77.5°	65.4	64.3	63.3	62.6	62.3	61.9	61.5	61.1
80°	52.7	52.1	51.5	51.0	50.6	50.3	49.9	49.5
82.5°	40.4	39.8	39.2	38.9	38.8	38.7	38.6	38.6
85°	23.2	22.7	22.4	22.2	22.2	22.2	22.2	22.2
87.5°	11.7	11.7	11.6	11.5	11.4	11.3	11.3	11.1
90°	15.5	16.0	16.6	17.0	17.2	17.4	17.7	18.0
92.5°	17.0	17.9	18.8	19.2	19.4	19.6	19.7	19.9
95°	20.5	21.4	22.3	22.8	22.8	22.8	22.8	22.8
97.5°	21.4	22.5	23.6	24.2	24.3	24.5	24.6	24.7
100°	21.9	23.0	24.1	24.7	24.8	24.9	25.0	25.2
102.5°	32.9	29.6	26.3	24.7	24.9	25.2	25.4	25.7
105°	84.2	60.6	37.0	25.4	25.6	25.8	26.2	26.4
107.5°	206.2	188.9	171.6	154.1	136.2	118.5	100.7	82.9
110°	261.8	257.4	253.0	241.2	222.2	203.1	184.0	165.0



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CATALOG NUMBER: S123RDIW-S775D755U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	301.0	301.1	301.2	299.1	295.1	291.1	287.1	283.1
115°	347.1	348.4	349.7	350.7	351.1	351.7	352.2	352.8
117.5°	388.7	389.8	390.9	391.4	391.6	391.7	391.8	391.9
120°	416.1	417.2	418.2	418.7	418.7	418.7	418.7	418.7
122.5°	442.8	443.5	444.3	444.7	444.8	444.9	445.1	445.2
125°	480.5	480.8	481.0	481.3	481.6	481.8	482.1	482.3
127.5°	518.3	518.7	519.1	519.2	518.9	518.6	518.4	518.1
130°	541.0	541.5	542.1	542.3	541.9	541.7	541.4	541.1
132.5°	562.6	563.1	563.7	563.8	563.4	563.0	562.6	562.2
135°	595.3	595.7	596.1	596.1	595.7	595.3	594.9	594.5
137.5°	624.5	625.2	625.8	626.0	625.7	625.4	625.2	624.9
140°	643.0	643.5	644.1	644.2	643.9	643.7	643.4	643.1
142.5°	660.6	661.0	661.4	661.5	661.0	660.7	660.3	659.9
145°	685.1	685.3	685.6	685.7	685.7	685.7	685.7	685.7
147.5°	707.0	707.3	707.6	707.4	706.8	706.1	705.6	704.9
150°	720.5	720.7	721.0	721.0	720.6	720.2	719.7	719.3
152.5°	732.4	732.9	733.4	733.3	732.7	732.1	731.5	730.8
155°	748.9	749.5	750.2	750.2	749.3	748.5	747.7	746.9
157.5°	763.2	763.9	764.8	764.7	763.6	762.5	761.6	760.5
160°	771.4	772.2	772.9	772.9	771.9	771.0	770.1	769.2
162.5°	778.8	779.7	780.6	780.6	779.8	778.9	778.1	777.3
165°	788.6	789.7	790.8	790.8	789.9	789.0	788.1	787.1
167.5°	796.3	797.4	798.5	798.5	797.4	796.3	795.2	794.2
170°	800.6	801.8	802.8	802.8	801.8	800.6	799.6	798.5
172.5°	803.6	804.6	805.7	805.6	804.5	803.3	802.1	801.0
175°	807.0	808.0	808.9	808.8	807.7	806.7	805.6	804.5
177.5°	808.3	809.1	810.0	809.8	808.8	807.7	806.7	805.6
180°	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6

(END OF REPORT)