

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: P332177-930

Luminaire Tested: **S123DIW-S775D1535U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332177-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S775D1535U930-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1535 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6974.4 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

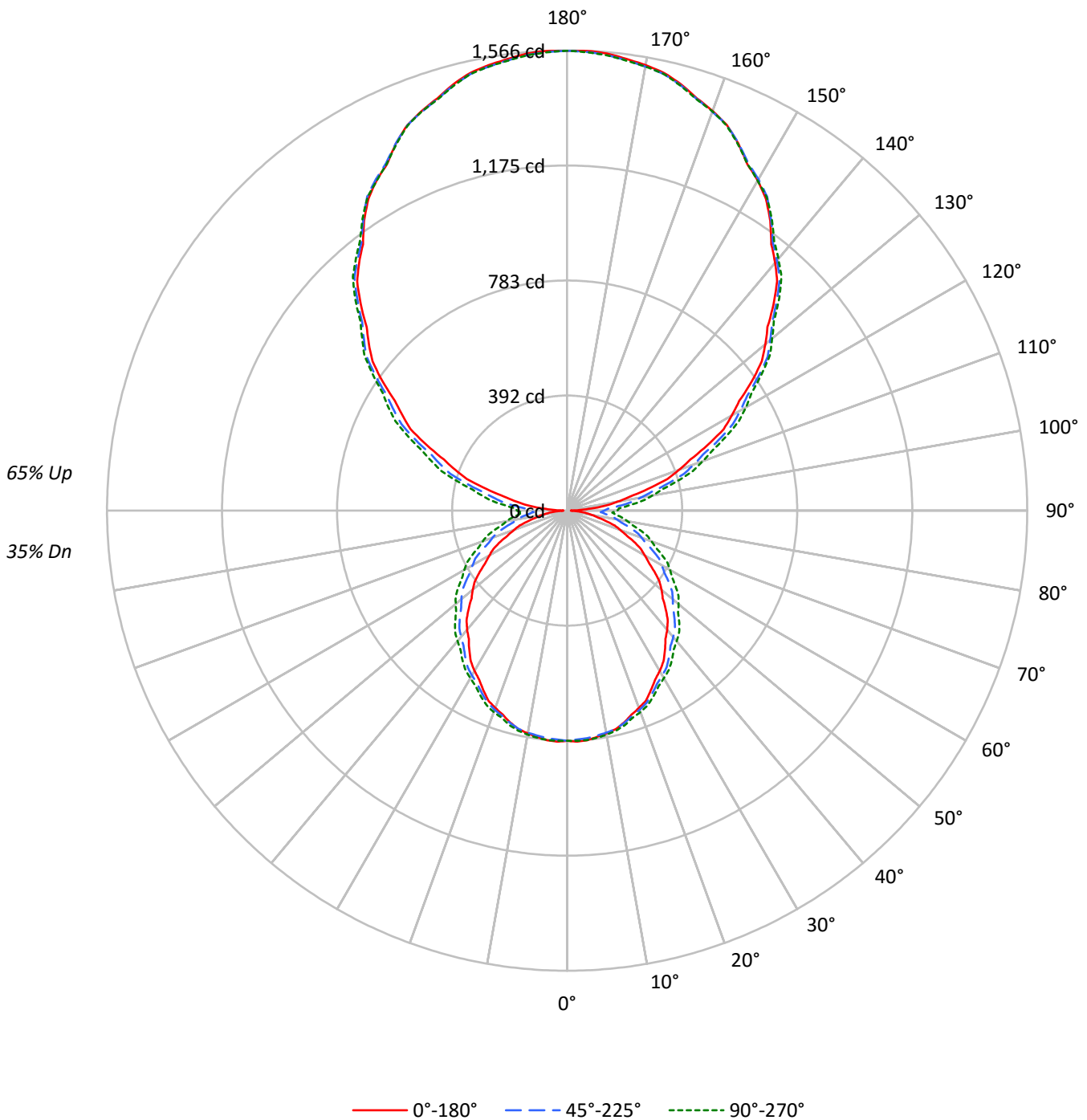
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	35
1	94	89	85	81	84	80	77	74	64	62	60	50	48	46	36	35	34	28
2	85	77	71	66	76	70	65	60	56	52	49	43	40	38	31	30	28	23
3	77	68	60	54	69	61	55	50	49	44	41	38	35	32	27	25	24	19
4	70	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16
5	65	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14
6	59	47	39	33	53	43	36	31	35	29	25	27	23	20	20	17	15	12
7	55	43	35	29	49	39	32	27	31	26	22	24	21	18	18	15	13	11
8	51	39	31	26	46	35	28	24	28	23	20	22	19	16	16	14	12	9
9	47	35	28	23	42	32	25	21	26	21	17	20	17	14	15	13	11	8
10	44	32	25	20	40	29	23	19	24	19	16	19	15	13	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8436	8436	8436
5°	8462	8223	8228
10°	8386	8033	7993
15°	8278	7819	7738
20°	8123	7573	7456
25°	7933	7290	7160
30°	7737	7036	6861
35°	7518	6767	6621
40°	7310	6522	6365
45°	7079	6288	6161
50°	6848	6055	5934
55°	6597	5818	5731
60°	6352	5577	5522
65°	6098	5319	5274
70°	5718	5030	5022
75°	5236	4699	4763
80°	4684	4372	4467
85°	4170	4150	4296



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	1.1
10°-20°	211.8	3.0
20°-30°	316.7	4.5
30°-40°	378.3	5.4
40°-50°	395.8	5.7
50°-60°	371.4	5.3
60°-70°	310.2	4.4
70°-80°	221.9	3.2
80°-90°	137.0	2.0
90°-100°	185.0	2.7
100°-110°	366.2	5.3
110°-120°	559.8	8.0
120°-130°	706.0	10.1
130°-140°	777.8	11.2
140°-150°	756.5	10.8
150°-160°	635.0	9.1
160°-170°	422.7	6.1
170°-180°	148.0	2.1
0°-30°	602.8	8.6
0°-40°	981.1	14.1
0°-60°	1748.2	25.1
0°-90°	2417.3	34.7
90°-120°	1111.0	15.9
90°-150°	3351.3	48.1
90°-180°	4557.0	65.3
0°-180°	6974.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	785	783	778	784	784	74
15°	747	749	749	757	756	210
25°	674	683	686	696	697	311
35°	580	594	605	618	622	363
45°	475	495	516	532	540	366
55°	362	390	421	443	451	324
65°	250	284	321	346	355	247
75°	136	176	219	246	257	145
85°	42	85	130	158	167	44
90°	12	67	126	159	171	12
95°	82	124	176	206	215	89
105°	284	308	354	377	388	303
115°	527	542	569	590	596	521
125°	767	772	793	806	807	684
135°	994	1000	1008	1018	1021	766
145°	1204	1206	1210	1215	1214	752
155°	1378	1378	1379	1384	1376	634
165°	1501	1498	1498	1504	1496	423
175°	1561	1557	1556	1563	1555	148
180°	1565	1565	1565	1565	1565	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	787.1	786.6	786.2	785.7	785.3	784.4	783.3	782.0	780.8	779.6	780.8
5°	784.6	784.2	783.7	783.4	783.0	782.3	781.1	780.0	778.9	777.7	779.3
7.5°	776.8	776.9	777.0	777.1	777.1	776.7	775.5	774.5	773.3	772.3	774.1
10°	770.1	770.4	770.8	771.2	771.5	771.3	770.3	769.4	768.4	767.4	769.4
12.5°	761.8	762.4	762.9	763.4	763.9	763.9	763.3	762.6	762.0	761.3	763.0
15°	747.0	747.5	748.1	748.7	749.3	749.4	749.3	749.1	748.9	748.7	750.6
17.5°	728.2	729.4	730.5	731.6	732.7	733.3	733.2	733.1	733.0	733.0	734.7
20°	714.5	715.7	716.8	718.0	719.1	719.8	720.2	720.6	721.0	721.4	723.1
22.5°	700.2	701.3	702.5	703.6	704.7	705.6	706.1	706.6	707.2	707.7	709.9
25°	674.4	676.3	678.2	680.1	682.0	683.2	683.8	684.4	684.9	685.5	687.9
27.5°	648.5	650.6	652.8	654.9	657.1	658.8	660.0	661.2	662.4	663.7	665.8
30°	630.0	632.5	635.0	637.4	639.8	641.9	643.4	644.9	646.5	647.9	650.2
32.5°	609.5	612.3	615.1	617.8	620.6	623.0	624.9	627.0	628.9	630.9	633.3
35°	580.5	583.5	586.6	589.6	592.6	595.4	597.9	600.3	602.8	605.3	608.1
37.5°	549.8	553.2	556.6	560.0	563.5	566.6	569.7	572.7	575.8	578.8	582.0
40°	529.3	532.7	536.1	539.6	542.9	546.6	550.3	554.2	557.9	561.7	564.9
42.5°	506.7	510.9	515.1	519.3	523.4	527.5	531.4	535.4	539.3	543.3	546.8
45°	474.7	479.2	483.7	488.3	492.8	497.5	502.2	507.0	511.8	516.5	520.1
47.5°	441.0	446.2	451.3	456.5	461.6	466.9	472.4	477.8	483.2	488.6	492.7
50°	419.1	424.4	429.7	435.1	440.4	446.0	451.9	457.8	463.7	469.5	473.9
52.5°	395.9	401.5	407.2	412.8	418.4	424.4	431.0	437.4	443.9	450.4	454.9
55°	362.0	368.2	374.5	380.7	387.0	393.5	400.4	407.2	414.0	420.9	426.0
57.5°	328.8	335.3	341.9	348.4	355.0	361.9	369.4	376.9	384.3	391.8	397.0
60°	305.7	312.4	319.3	326.1	333.0	340.2	348.1	355.8	363.5	371.4	376.7
62.5°	283.7	290.7	297.7	304.7	311.7	319.3	327.5	335.7	344.0	352.2	357.5
65°	250.1	257.6	264.9	272.3	279.7	287.6	296.0	304.3	312.7	321.0	326.7
67.5°	216.0	223.8	231.7	239.5	247.4	255.6	264.1	272.6	281.0	289.6	295.8
70°	192.1	200.2	208.4	216.5	224.7	233.3	242.5	251.5	260.7	269.8	275.8
72.5°	170.2	178.4	186.5	194.7	202.8	211.7	221.0	230.5	239.9	249.2	255.5
75°	135.7	144.6	153.6	162.5	171.4	180.6	190.0	199.6	209.0	218.6	224.8
77.5°	105.7	114.7	123.7	132.6	141.6	150.9	160.5	170.1	179.6	189.1	195.8
80°	84.5	93.8	103.1	112.4	121.7	131.3	141.1	151.0	160.9	170.7	177.2
82.5°	66.0	75.5	85.0	94.4	103.9	113.6	123.6	133.6	143.7	153.7	160.1
85°	41.8	51.3	60.8	70.3	79.7	89.5	99.6	109.7	119.7	129.8	136.2
87.5°	23.0	32.9	43.0	52.9	62.9	73.1	83.5	93.9	104.3	114.6	121.3
90°	12.3	24.4	36.4	48.4	60.4	73.1	86.3	99.5	112.8	126.0	133.5
92.5°	40.2	50.4	60.7	70.9	81.1	92.0	103.5	115.1	126.7	138.2	145.4
95°	81.9	91.2	100.5	109.8	119.2	129.6	141.0	152.5	164.0	175.5	182.5
97.5°	137.2	145.3	153.4	161.5	169.6	178.9	189.3	199.8	210.3	220.7	227.6
100°	174.9	182.6	190.3	198.0	205.7	214.6	224.7	234.8	244.9	255.0	261.3
102.5°	218.5	224.9	231.4	237.8	244.3	252.7	263.0	273.5	283.8	294.2	300.4
105°	283.5	288.5	293.7	298.7	303.9	311.7	322.3	333.0	343.6	354.2	359.5
107.5°	358.2	362.3	366.6	370.7	375.0	381.4	390.1	398.8	407.6	416.3	422.2
110°	404.7	408.6	412.6	416.5	420.5	426.6	434.7	442.9	451.0	459.1	465.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	453.9	457.0	460.2	463.3	466.4	471.7	479.1	486.5	493.8	501.2	507.4
115°	526.8	529.9	533.0	536.1	539.2	543.9	550.2	556.4	562.7	569.0	573.8
117.5°	600.9	602.8	604.8	606.7	608.7	612.5	618.2	623.9	629.6	635.3	639.8
120°	646.4	649.0	651.6	654.2	656.7	660.5	665.4	670.3	675.1	680.0	684.2
122.5°	694.6	696.3	698.0	699.7	701.4	704.8	710.1	715.3	720.6	725.9	729.4
125°	767.3	768.1	768.9	769.7	770.5	773.4	778.4	783.3	788.3	793.3	796.1
127.5°	835.1	836.7	838.2	839.8	841.4	844.2	848.1	852.0	856.0	859.9	862.2
130°	880.4	882.4	884.4	886.4	888.4	890.9	893.8	896.8	899.8	902.7	905.2
132.5°	925.0	927.1	929.2	931.4	933.5	935.8	938.2	940.7	943.1	945.6	947.7
135°	993.8	995.3	996.8	998.2	999.6	1001.3	1003.1	1004.9	1006.7	1008.5	1010.9
137.5°	1057.6	1058.8	1060.1	1061.3	1062.5	1064.0	1065.9	1067.8	1069.7	1071.5	1073.4
140°	1101.2	1102.5	1103.9	1105.3	1106.7	1107.7	1108.6	1109.5	1110.3	1111.1	1113.7
142.5°	1141.5	1142.7	1143.9	1145.2	1146.4	1147.3	1147.9	1148.5	1149.1	1149.7	1151.9
145°	1204.4	1204.8	1205.2	1205.5	1205.9	1206.5	1207.3	1208.1	1208.9	1209.7	1211.0
147.5°	1258.7	1259.6	1260.6	1261.7	1262.7	1263.5	1264.3	1265.0	1265.8	1266.6	1267.0
150°	1297.1	1297.6	1298.1	1298.7	1299.3	1299.8	1300.3	1300.9	1301.4	1302.0	1302.0
152.5°	1328.5	1329.3	1330.1	1330.8	1331.5	1332.1	1332.4	1332.8	1333.1	1333.4	1333.9
155°	1378.2	1378.2	1378.2	1378.2	1378.2	1378.3	1378.6	1378.8	1379.2	1379.4	1380.5
157.5°	1420.5	1420.2	1419.8	1419.5	1419.2	1419.1	1419.4	1419.5	1419.8	1420.0	1421.1
160°	1447.1	1446.5	1445.9	1445.4	1444.9	1444.5	1444.5	1444.5	1444.5	1444.5	1445.9
162.5°	1470.6	1469.9	1469.1	1468.4	1467.6	1467.3	1467.5	1467.8	1467.9	1468.2	1469.6
165°	1501.1	1500.3	1499.5	1498.7	1497.9	1497.5	1497.5	1497.5	1497.5	1497.5	1499.1
167.5°	1525.5	1524.4	1523.3	1522.2	1521.1	1520.7	1520.9	1521.1	1521.3	1521.5	1523.2
170°	1539.2	1538.1	1537.1	1535.9	1534.9	1534.3	1534.3	1534.3	1534.3	1534.3	1536.3
172.5°	1550.0	1549.0	1547.8	1546.8	1545.7	1545.2	1545.2	1545.2	1545.2	1545.2	1546.9
175°	1561.4	1560.3	1559.2	1558.1	1557.0	1556.5	1556.5	1556.5	1556.5	1556.5	1558.1
177.5°	1566.0	1565.2	1564.3	1563.4	1562.5	1562.1	1562.1	1562.1	1562.1	1562.1	1563.4
180°	1565.0	1565.0	1565.0	1565.0	1565.0	1565.0	1565.0	1565.0	1565.0	1565.0	1565.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	782.0	783.3	784.4	785.0	784.8	784.6	784.5	784.4
5°	780.7	782.3	783.7	784.4	784.2	784.1	783.9	783.7
7.5°	776.0	778.0	779.8	780.6	780.4	780.2	780.0	779.8
10°	771.3	773.1	775.0	775.8	775.4	775.0	774.7	774.3
12.5°	764.8	766.5	768.3	769.0	768.6	768.3	767.8	767.4
15°	752.4	754.4	756.3	757.1	756.9	756.8	756.5	756.4
17.5°	736.4	738.1	739.8	740.5	740.3	740.0	739.7	739.5
20°	724.8	726.5	728.2	729.1	729.4	729.5	729.7	729.9
22.5°	712.0	714.2	716.3	717.4	717.3	717.1	717.1	716.9
25°	690.5	692.9	695.4	696.6	696.6	696.6	696.6	696.6
27.5°	667.9	670.0	672.1	673.3	673.4	673.6	673.8	673.9
30°	652.5	654.8	657.0	658.2	658.2	658.2	658.2	658.2
32.5°	635.7	638.1	640.6	642.0	642.5	642.9	643.4	643.8
35°	611.0	613.8	616.6	618.5	619.2	620.0	620.7	621.5
37.5°	585.2	588.5	591.7	593.6	594.2	594.8	595.4	596.1
40°	568.2	571.4	574.6	576.6	577.4	578.1	578.9	579.7
42.5°	550.3	553.8	557.4	559.7	560.8	561.8	562.9	563.9
45°	523.7	527.3	530.9	533.5	535.0	536.5	538.0	539.6
47.5°	496.8	500.8	504.9	507.5	508.7	509.9	511.0	512.2
50°	478.3	482.6	487.0	489.8	491.1	492.4	493.8	495.1
52.5°	459.4	464.0	468.5	471.6	473.2	474.8	476.5	478.1
55°	431.1	436.3	441.3	444.7	446.2	447.7	449.2	450.8
57.5°	402.2	407.3	412.5	416.0	417.8	419.6	421.3	423.1
60°	382.0	387.3	392.6	396.3	398.4	400.5	402.6	404.6
62.5°	362.9	368.2	373.5	377.1	379.0	381.0	382.9	384.8
65°	332.4	338.0	343.7	347.6	349.4	351.3	353.3	355.1
67.5°	302.0	308.3	314.5	318.4	319.9	321.6	323.2	324.7
70°	281.9	288.0	294.1	298.0	299.9	301.8	303.7	305.7
72.5°	261.7	267.9	274.2	278.3	280.1	282.0	283.9	285.8
75°	231.1	237.3	243.6	247.9	250.1	252.4	254.7	257.0
77.5°	202.4	209.0	215.6	219.7	221.5	223.2	225.0	226.7
80°	183.6	190.0	196.6	200.7	202.6	204.5	206.4	208.3
82.5°	166.6	173.0	179.4	183.6	185.6	187.4	189.3	191.2
85°	142.7	149.1	155.6	159.7	161.6	163.5	165.4	167.3
87.5°	128.0	134.7	141.4	145.7	147.7	149.7	151.7	153.7
90°	141.0	148.6	156.1	161.1	163.5	166.0	168.4	170.9
92.5°	152.5	159.7	166.9	171.2	172.6	174.1	175.5	176.8
95°	189.5	196.4	203.4	207.8	209.7	211.7	213.5	215.4
97.5°	234.6	241.5	248.3	252.7	254.5	256.3	258.1	259.8
100°	267.7	273.9	280.3	284.7	287.1	289.5	292.0	294.4
102.5°	306.6	312.7	318.9	322.9	324.7	326.4	328.2	330.0
105°	364.8	370.1	375.4	379.2	381.5	383.7	386.0	388.2
107.5°	428.2	434.1	440.2	443.8	445.2	446.5	447.8	449.1
110°	471.2	477.2	483.2	486.7	487.7	488.7	489.7	490.6



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CATALOG NUMBER: S123DIW-S775D1535U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	513.4	519.5	525.6	529.5	531.0	532.6	534.1	535.7
115°	578.6	583.4	588.3	591.3	592.6	593.8	595.1	596.3
117.5°	644.2	648.7	653.1	655.7	656.5	657.1	657.9	658.6
120°	688.3	692.4	696.4	698.9	699.7	700.4	701.2	702.0
122.5°	732.9	736.4	739.8	741.8	742.4	743.0	743.6	744.1
125°	799.0	801.9	804.8	806.4	806.6	806.8	807.1	807.3
127.5°	864.4	866.6	868.9	869.9	870.0	870.0	870.1	870.1
130°	907.8	910.3	912.8	913.6	912.9	912.1	911.3	910.5
132.5°	949.8	951.9	954.1	955.1	954.9	954.7	954.6	954.4
135°	1013.2	1015.5	1017.8	1019.2	1019.6	1020.0	1020.4	1020.8
137.5°	1075.3	1077.1	1079.0	1079.9	1079.8	1079.7	1079.6	1079.5
140°	1116.3	1118.8	1121.4	1122.3	1121.3	1120.3	1119.3	1118.3
142.5°	1154.2	1156.5	1158.8	1159.7	1159.1	1158.6	1158.1	1157.6
145°	1212.3	1213.5	1214.7	1215.2	1214.9	1214.6	1214.2	1213.8
147.5°	1267.5	1268.0	1268.4	1268.1	1267.1	1266.2	1265.3	1264.3
150°	1302.0	1302.0	1302.0	1301.3	1300.1	1298.9	1297.5	1296.3
152.5°	1334.3	1334.7	1335.2	1334.7	1333.4	1332.0	1330.7	1329.3
155°	1381.6	1382.7	1383.8	1383.4	1381.4	1379.6	1377.6	1375.7
157.5°	1422.3	1423.4	1424.6	1424.4	1422.9	1421.3	1419.8	1418.3
160°	1447.3	1448.7	1450.0	1450.2	1449.1	1448.0	1446.9	1445.8
162.5°	1470.9	1472.3	1473.7	1473.5	1471.7	1470.0	1468.2	1466.5
165°	1500.7	1502.4	1504.0	1503.9	1501.9	1500.1	1498.1	1496.2
167.5°	1524.9	1526.6	1528.3	1528.3	1526.6	1524.9	1523.2	1521.5
170°	1538.1	1540.1	1542.0	1542.0	1540.1	1538.1	1536.3	1534.3
172.5°	1548.5	1550.2	1551.9	1551.8	1549.9	1548.0	1546.1	1544.2
175°	1559.7	1561.4	1563.0	1562.8	1561.0	1559.0	1557.1	1555.3
177.5°	1564.7	1566.0	1567.3	1567.2	1565.7	1564.2	1562.7	1561.1
180°	1565.0	1565.0	1565.0	1565.0	1565.0	1565.0	1565.0	1565.0

(END OF REPORT)