

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: P332766-840

Luminaire Tested: **S124DIW-S575D1340U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332766-840
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: S124DIW-S575D1340U840-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7095.5 lumens
Efficiency: N/A
Efficacy: 131.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

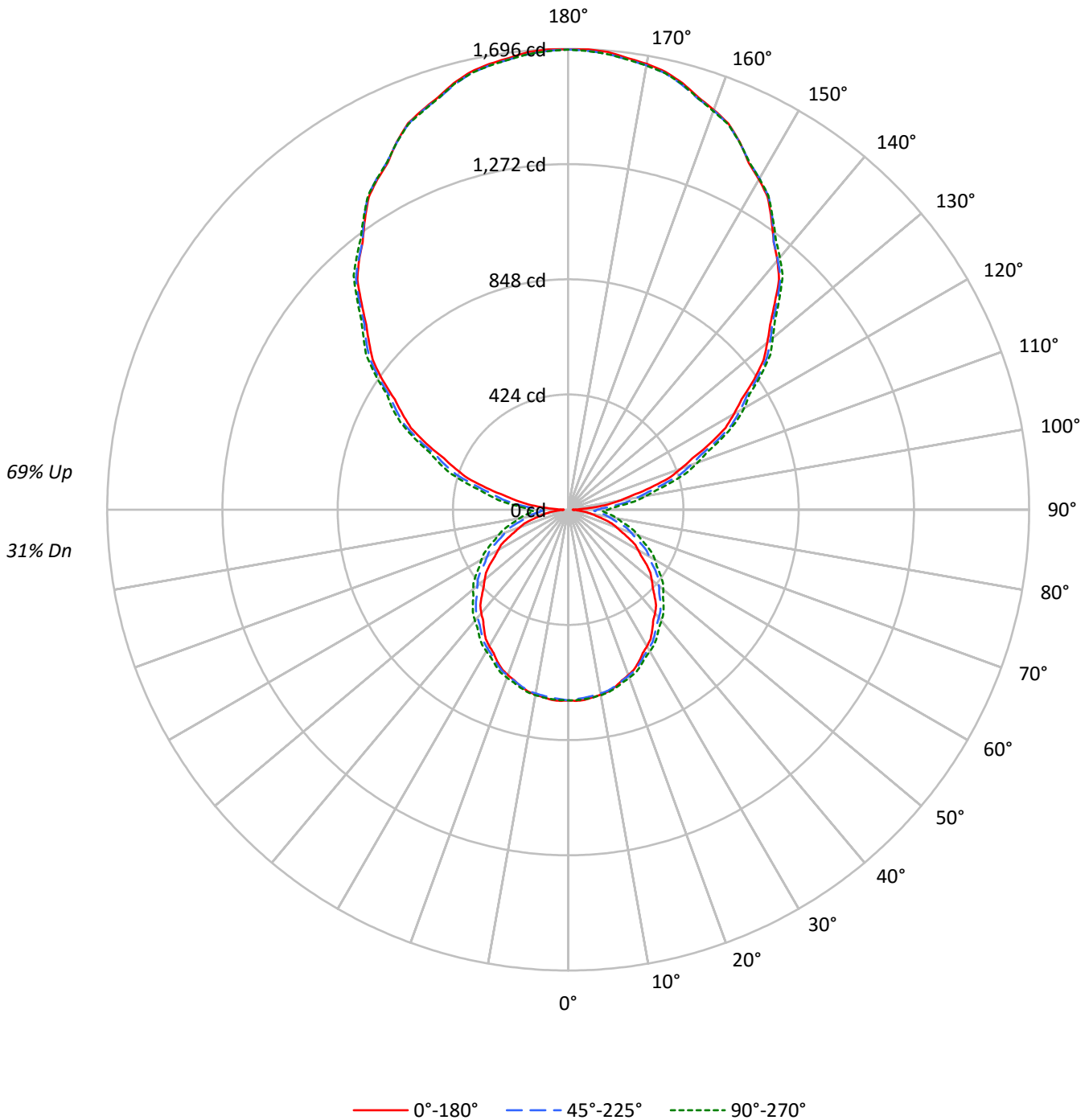
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	93	88	84	81	83	80	76	73	63	60	58	47	46	45	33	32	31	25
2	84	77	71	65	75	69	64	59	55	51	48	41	39	37	29	27	26	20
3	77	67	60	54	69	61	54	49	48	43	40	36	33	31	25	23	22	17
4	70	59	51	45	62	53	47	41	42	37	34	32	29	26	23	20	19	14
5	64	53	45	39	57	47	40	35	38	33	29	29	25	22	20	18	16	12
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	18	16	14	11
7	54	42	34	29	49	38	31	26	31	25	22	23	20	17	17	14	12	9
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11	8
9	47	35	27	22	42	31	25	21	25	20	17	19	16	13	14	12	10	8
10	43	32	25	20	39	29	22	18	23	18	15	18	14	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5666	5666	5666
5°	5683	5537	5552
10°	5649	5446	5442
15°	5598	5341	5312
20°	5521	5226	5185
25°	5435	5096	5047
30°	5342	4967	4904
35°	5237	4834	4779
40°	5153	4710	4648
45°	5027	4594	4537
50°	4920	4460	4418
55°	4811	4333	4278
60°	4641	4173	4153
65°	4454	4001	3997
70°	4226	3805	3816
75°	3910	3587	3652
80°	3559	3381	3492
85°	3112	3195	3398



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	0.9
10°-20°	190.4	2.7
20°-30°	287.9	4.1
30°-40°	348.3	4.9
40°-50°	368.3	5.2
50°-60°	346.6	4.9
60°-70°	287.5	4.1
70°-80°	202.0	2.8
80°-90°	119.2	1.7
90°-100°	179.5	2.5
100°-110°	381.1	5.4
110°-120°	595.3	8.4
120°-130°	759.5	10.7
130°-140°	839.8	11.8
140°-150°	818.9	11.5
150°-160°	687.3	9.7
160°-170°	457.3	6.4
170°-180°	160.1	2.3
0°-30°	544.7	7.7
0°-40°	893.1	12.6
0°-60°	1607.9	22.7
0°-90°	2216.7	31.2
90°-120°	1155.8	16.3
90°-150°	3574.0	50.4
90°-180°	4879.0	68.8
0°-180°	7095.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	703	700	695	700	700	67
15°	674	674	672	678	678	190
25°	616	621	623	631	633	284
35°	539	548	556	567	570	337
45°	450	464	479	492	497	347
55°	352	369	392	407	412	314
65°	244	269	296	314	321	241
75°	135	164	197	218	226	144
85°	42	75	110	133	142	44
90°	16	62	107	136	146	13
95°	89	127	168	192	200	96
105°	312	330	364	386	397	332
115°	576	584	605	621	626	568
125°	835	835	852	864	867	744
135°	1074	1082	1088	1097	1098	831
145°	1304	1308	1310	1313	1312	816
155°	1493	1493	1492	1496	1492	687
165°	1625	1621	1619	1626	1621	458
175°	1691	1685	1683	1691	1683	160
180°	1693	1693	1693	1693	1693	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	704.3	703.9	703.5	703.0	702.6	701.9	700.7	699.6	698.4	697.3	698.3
5°	702.6	702.1	701.5	700.9	700.4	699.5	698.3	697.1	695.9	694.7	696.1
7.5°	696.6	696.2	695.9	695.6	695.3	694.7	693.7	692.7	691.6	690.5	692.2
10°	691.6	691.4	691.2	691.1	690.8	690.3	689.4	688.5	687.7	686.8	688.4
12.5°	684.6	684.6	684.6	684.5	684.5	684.2	683.6	683.0	682.4	681.8	683.2
15°	673.5	673.7	673.8	674.0	674.2	674.0	673.5	673.0	672.4	671.9	673.5
17.5°	658.2	658.7	659.2	659.7	660.4	660.6	660.5	660.4	660.2	660.1	661.7
20°	647.5	648.0	648.5	649.1	649.6	649.9	650.2	650.4	650.5	650.7	652.4
22.5°	635.6	636.2	636.9	637.5	638.2	638.7	639.0	639.3	639.6	640.0	641.8
25°	616.1	617.1	618.2	619.2	620.3	621.1	621.6	622.1	622.7	623.2	625.1
27.5°	594.4	595.9	597.4	599.1	600.6	601.7	602.5	603.3	604.1	604.9	606.7
30°	580.0	581.4	582.7	584.1	585.5	586.8	588.0	589.3	590.5	591.8	593.7
32.5°	564.2	565.9	567.5	569.3	571.0	572.5	573.8	575.2	576.5	577.9	580.1
35°	539.1	541.2	543.3	545.3	547.4	549.4	551.1	552.9	554.6	556.3	558.9
37.5°	513.8	516.1	518.6	521.0	523.4	525.7	527.9	530.1	532.2	534.3	536.8
40°	497.5	499.7	502.0	504.2	506.5	508.9	511.3	513.7	516.2	518.7	521.3
42.5°	478.6	481.1	483.6	486.3	488.8	491.5	494.3	497.2	500.1	502.9	505.8
45°	449.5	452.8	456.2	459.5	462.7	466.1	469.4	472.7	476.1	479.4	482.3
47.5°	421.7	425.1	428.5	431.9	435.4	439.0	442.8	446.7	450.5	454.3	457.5
50°	401.5	405.4	409.2	413.1	417.0	420.8	424.6	428.5	432.3	436.2	439.6
52.5°	381.4	385.3	389.1	392.9	396.8	400.9	405.4	409.7	414.1	418.5	422.0
55°	352.0	355.7	359.4	363.0	366.7	371.1	376.4	381.6	386.9	392.1	395.7
57.5°	319.2	323.8	328.3	332.9	337.4	342.2	347.4	352.6	357.9	363.0	367.2
60°	297.8	302.4	306.9	311.4	316.0	321.1	326.9	332.6	338.4	344.2	348.2
62.5°	277.1	282.1	287.0	292.0	296.9	302.3	308.0	313.8	319.6	325.4	329.3
65°	243.6	249.2	254.8	260.3	266.0	271.8	277.6	283.6	289.5	295.5	299.8
67.5°	211.4	217.3	223.3	229.2	235.1	241.3	247.6	254.0	260.3	266.7	271.1
70°	189.3	195.3	201.3	207.2	213.2	219.4	226.0	232.7	239.3	246.0	250.6
72.5°	168.0	174.1	180.2	186.2	192.3	198.8	205.9	213.0	220.0	227.1	231.7
75°	135.1	141.6	148.0	154.5	161.0	167.9	175.2	182.6	190.0	197.2	202.2
77.5°	104.5	111.4	118.3	125.0	131.9	139.2	146.8	154.5	162.2	169.9	174.8
80°	85.6	92.6	99.7	106.6	113.6	120.9	128.7	136.3	144.0	151.7	156.9
82.5°	66.8	74.0	81.3	88.6	95.8	103.3	111.0	118.7	126.3	134.1	139.5
85°	41.6	49.0	56.4	63.6	71.0	78.6	86.4	94.3	102.2	110.0	115.2
87.5°	24.0	31.8	39.6	47.4	55.1	63.0	71.2	79.3	87.4	95.5	100.9
90°	16.5	26.7	36.9	47.1	57.3	67.3	77.1	86.9	96.7	106.6	113.4
92.5°	40.0	49.9	59.9	69.9	79.8	89.4	98.5	107.7	116.7	125.9	131.9
95°	88.8	97.1	105.5	113.9	122.3	131.1	140.3	149.5	158.8	167.9	173.5
97.5°	146.5	153.6	160.7	167.7	174.7	183.0	192.5	202.0	211.5	221.0	226.5
100°	192.0	197.7	203.4	209.1	214.8	222.4	231.8	241.3	250.6	260.1	265.4
102.5°	240.1	244.7	249.1	253.6	258.0	264.8	273.8	282.9	292.0	300.9	306.4
105°	312.3	316.0	319.8	323.6	327.4	333.1	340.7	348.3	356.0	363.6	368.8
107.5°	389.3	392.5	395.8	399.0	402.2	407.0	413.2	419.5	425.8	432.1	437.2
110°	441.1	444.1	447.2	450.2	453.2	457.7	463.4	469.3	475.1	480.9	484.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	494.9	497.3	499.5	501.8	504.1	507.9	513.2	518.5	523.8	529.1	532.9
115°	575.7	577.3	578.9	580.5	582.0	585.3	590.3	595.3	600.4	605.3	608.8
117.5°	652.6	653.8	654.9	656.1	657.3	660.2	665.1	669.8	674.7	679.4	682.1
120°	703.3	705.0	706.7	708.3	710.0	713.0	717.2	721.3	725.6	729.7	731.7
122.5°	756.7	757.3	757.9	758.4	759.0	761.4	765.9	770.2	774.7	779.0	781.5
125°	834.8	834.7	834.5	834.2	834.0	836.1	840.1	844.1	848.3	852.3	855.1
127.5°	906.2	906.9	907.6	908.3	909.0	910.7	913.6	916.5	919.4	922.3	924.8
130°	955.8	956.5	957.2	957.9	958.6	960.4	963.1	965.9	968.8	971.5	974.1
132.5°	1007.1	1007.6	1008.0	1008.6	1009.0	1010.3	1012.3	1014.2	1016.2	1018.2	1020.7
135°	1074.2	1075.9	1077.7	1079.4	1081.2	1082.7	1083.9	1085.1	1086.3	1087.5	1089.7
137.5°	1148.0	1148.7	1149.3	1150.0	1150.6	1151.4	1152.6	1153.6	1154.7	1155.7	1157.5
140°	1197.3	1197.7	1198.1	1198.5	1198.9	1199.2	1199.4	1199.6	1199.7	1199.9	1201.9
142.5°	1241.7	1242.2	1242.8	1243.3	1244.0	1244.1	1243.6	1243.3	1243.0	1242.6	1244.6
145°	1303.9	1304.9	1305.9	1306.9	1307.9	1308.5	1308.8	1309.1	1309.4	1309.7	1310.4
147.5°	1365.7	1367.0	1368.2	1369.4	1370.6	1371.1	1370.9	1370.7	1370.4	1370.2	1370.1
150°	1403.4	1404.4	1405.4	1406.4	1407.4	1407.9	1407.9	1407.9	1407.9	1407.9	1407.9
152.5°	1438.5	1439.2	1439.8	1440.5	1441.1	1441.6	1441.8	1442.0	1442.3	1442.5	1443.2
155°	1493.0	1493.0	1493.0	1493.0	1493.0	1492.9	1492.6	1492.3	1492.0	1491.8	1492.9
157.5°	1539.1	1538.6	1538.1	1537.5	1537.0	1536.7	1536.7	1536.6	1536.6	1536.5	1537.4
160°	1566.4	1566.1	1565.8	1565.5	1565.2	1564.9	1564.6	1564.4	1564.1	1563.8	1564.6
162.5°	1591.5	1590.7	1590.0	1589.2	1588.5	1588.0	1587.7	1587.4	1587.1	1586.8	1588.4
165°	1625.3	1624.5	1623.6	1622.7	1621.8	1621.1	1620.5	1619.9	1619.3	1618.7	1620.5
167.5°	1651.2	1650.0	1648.8	1647.6	1646.4	1645.8	1645.9	1645.9	1646.0	1646.0	1647.8
170°	1665.9	1664.5	1663.0	1661.5	1660.1	1659.5	1659.8	1660.1	1660.4	1660.6	1662.4
172.5°	1676.4	1675.2	1674.0	1672.7	1671.5	1670.9	1671.0	1671.0	1671.1	1671.1	1673.1
175°	1690.8	1689.3	1687.9	1686.5	1685.0	1684.1	1683.8	1683.5	1683.2	1682.9	1685.0
177.5°	1695.5	1694.4	1693.1	1692.0	1690.8	1690.3	1690.3	1690.3	1690.3	1690.3	1691.9
180°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	699.3	700.2	701.3	701.7	701.6	701.4	701.3	701.1
5°	697.5	698.8	700.2	700.8	700.7	700.5	700.3	700.1
7.5°	693.8	695.3	696.9	697.6	697.4	697.2	697.0	696.9
10°	689.9	691.6	693.1	693.8	693.7	693.5	693.3	693.1
12.5°	684.7	686.1	687.5	688.2	688.2	688.1	688.1	688.1
15°	675.0	676.6	678.1	678.8	678.7	678.5	678.3	678.1
17.5°	663.3	664.9	666.5	667.2	667.1	667.0	666.8	666.7
20°	654.2	655.9	657.6	658.5	658.5	658.5	658.5	658.5
22.5°	643.5	645.2	646.9	648.0	648.2	648.5	648.8	649.1
25°	627.0	628.9	630.9	631.9	632.1	632.3	632.4	632.6
27.5°	608.5	610.3	612.1	613.1	613.3	613.5	613.7	613.9
30°	595.6	597.5	599.5	600.6	600.9	601.3	601.6	602.0
32.5°	582.3	584.5	586.7	587.9	588.3	588.7	589.1	589.4
35°	561.3	563.7	566.1	567.6	568.2	568.7	569.2	569.8
37.5°	539.4	541.8	544.3	545.8	546.3	546.9	547.4	548.1
40°	523.9	526.5	529.2	530.8	531.5	532.2	532.9	533.6
42.5°	508.8	511.6	514.5	516.2	516.8	517.4	518.0	518.5
45°	485.3	488.3	491.2	493.1	494.0	494.9	495.7	496.7
47.5°	460.5	463.6	466.7	468.7	469.8	470.8	471.9	472.9
50°	443.1	446.7	450.1	452.4	453.4	454.4	455.6	456.6
52.5°	425.6	429.0	432.5	434.7	435.9	436.9	437.9	439.0
55°	399.1	402.6	406.1	408.4	409.4	410.5	411.5	412.5
57.5°	371.3	375.6	379.7	382.2	383.2	384.2	385.2	386.2
60°	352.2	356.3	360.2	362.9	364.4	365.8	367.2	368.6
62.5°	333.4	337.4	341.4	344.1	345.5	346.9	348.3	349.7
65°	304.2	308.6	313.0	315.8	317.2	318.6	320.0	321.4
67.5°	275.6	280.0	284.5	287.3	288.7	290.0	291.4	292.8
70°	255.4	260.1	264.8	267.8	269.0	270.2	271.5	272.7
72.5°	236.2	240.9	245.4	248.3	249.7	251.1	252.5	253.8
75°	207.0	211.9	216.8	220.0	221.6	223.2	224.8	226.3
77.5°	179.9	184.8	189.8	193.1	194.7	196.4	198.0	199.8
80°	162.2	167.3	172.6	175.9	177.3	178.7	180.2	181.6
82.5°	144.8	150.2	155.6	159.1	160.6	162.1	163.6	165.2
85°	120.5	125.7	131.0	134.5	136.2	137.9	139.7	141.5
87.5°	106.3	111.8	117.1	120.7	122.4	124.0	125.6	127.3
90°	120.3	127.0	133.8	138.3	140.3	142.2	144.2	146.1
92.5°	137.8	143.8	149.8	153.6	155.4	157.1	158.9	160.7
95°	179.0	184.7	190.3	193.8	195.4	197.0	198.5	200.2
97.5°	232.2	237.8	243.4	247.0	248.4	249.9	251.5	253.0
100°	270.7	276.0	281.2	284.6	285.8	287.0	288.2	289.4
102.5°	311.7	317.1	322.6	326.0	327.6	329.2	330.8	332.4
105°	374.1	379.3	384.6	388.3	390.5	392.8	395.1	397.4
107.5°	442.3	447.5	452.5	455.7	456.9	458.1	459.3	460.5
110°	487.8	491.2	494.6	497.5	499.8	502.0	504.3	506.5



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CATALOG NUMBER: S124DIW-S575D1340U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	536.6	540.4	544.1	546.8	548.4	550.0	551.5	553.1
115°	612.5	616.0	619.6	621.8	622.7	623.6	624.6	625.5
117.5°	684.8	687.4	690.0	691.8	692.6	693.4	694.2	695.0
120°	733.9	735.9	737.9	739.9	741.8	743.9	745.9	747.8
122.5°	784.0	786.5	789.0	790.3	790.6	790.8	791.0	791.2
125°	857.8	860.5	863.2	864.8	865.4	865.9	866.3	866.8
127.5°	927.4	930.0	932.5	934.1	934.9	935.6	936.3	937.1
130°	976.6	979.2	981.8	983.0	982.9	982.8	982.6	982.5
132.5°	1023.1	1025.5	1027.9	1029.5	1030.1	1030.6	1031.2	1031.8
135°	1092.0	1094.2	1096.4	1097.6	1097.7	1097.9	1098.1	1098.3
137.5°	1159.3	1161.0	1162.9	1164.3	1165.4	1166.4	1167.4	1168.5
140°	1203.9	1205.9	1207.8	1209.1	1209.7	1210.3	1210.8	1211.4
142.5°	1246.6	1248.5	1250.4	1251.7	1252.3	1253.0	1253.7	1254.5
145°	1311.2	1311.9	1312.7	1313.0	1312.8	1312.6	1312.5	1312.3
147.5°	1370.0	1369.9	1369.8	1369.9	1370.2	1370.4	1370.7	1371.0
150°	1407.9	1407.9	1407.9	1407.8	1407.4	1407.1	1406.8	1406.6
152.5°	1443.9	1444.6	1445.3	1445.2	1444.5	1443.7	1443.0	1442.2
155°	1494.1	1495.2	1496.4	1496.4	1495.2	1494.1	1492.9	1491.8
157.5°	1538.2	1539.1	1540.0	1539.9	1538.9	1537.9	1537.0	1536.0
160°	1565.5	1566.4	1567.2	1566.9	1565.5	1564.1	1562.6	1561.2
162.5°	1589.9	1591.5	1593.1	1593.2	1591.6	1590.2	1588.8	1587.3
165°	1622.2	1624.0	1625.8	1626.1	1624.9	1623.7	1622.6	1621.3
167.5°	1649.5	1651.2	1652.9	1652.9	1651.1	1649.3	1647.6	1645.8
170°	1664.2	1665.9	1667.7	1667.5	1665.5	1663.4	1661.4	1659.4
172.5°	1675.1	1677.1	1679.1	1679.0	1677.0	1675.0	1672.9	1670.9
175°	1687.0	1689.0	1691.1	1691.1	1689.0	1687.0	1685.0	1682.9
177.5°	1693.5	1695.2	1696.8	1696.7	1694.9	1692.9	1691.1	1689.2
180°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4

(END OF REPORT)