

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: P332772-930

Luminaire Tested: **S124DIW-S575D1560U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332772-930
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: S124DIW-S575D1560U930-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6346.1 lumens
Efficiency: N/A
Efficacy: 104.7 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

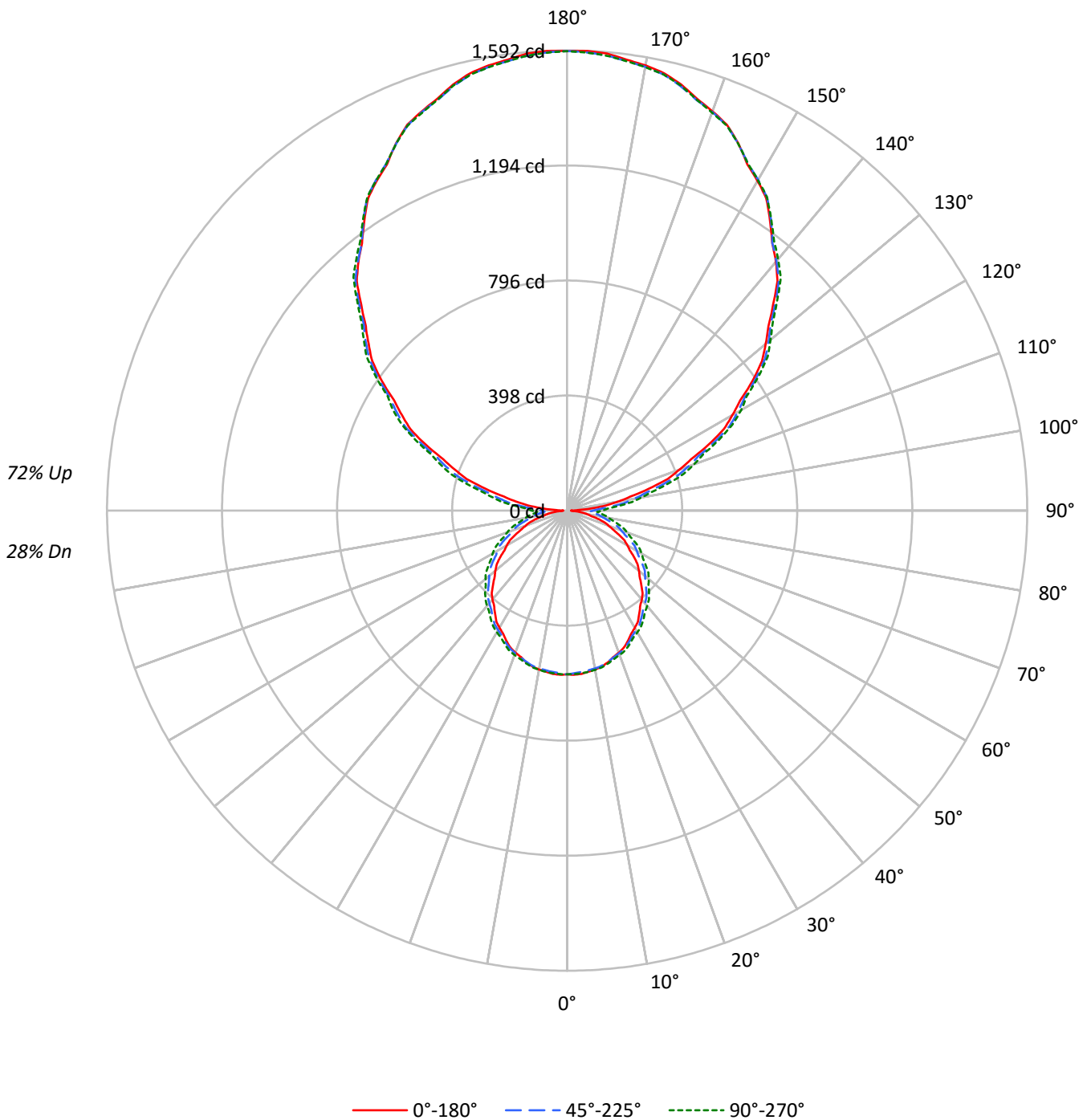
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28				
1	92	88	84	80	82	79	75	72	61	59	57	46	44	43	31	30	29	23				
2	84	76	70	65	75	68	63	59	53	50	47	40	37	35	27	25	24	18				
3	76	67	60	54	68	60	54	49	47	42	39	35	32	29	24	22	20	15				
4	70	59	51	45	62	53	46	41	41	37	33	31	28	25	21	19	17	13				
5	64	52	44	38	57	47	40	35	37	32	28	27	24	21	19	17	15	11				
6	58	47	39	33	52	42	35	30	33	28	24	25	21	19	17	15	13	10				
7	54	42	34	29	48	38	31	26	30	25	21	22	19	16	15	13	11	9				
8	50	38	30	25	44	34	28	23	27	22	19	20	17	14	14	12	10	8				
9	46	34	27	22	41	31	25	20	25	20	17	19	15	13	13	11	9	7				
10	43	31	24	20	39	28	22	18	23	18	15	17	14	11	12	10	8	6				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4574	4574	4574
5°	4588	4470	4482
10°	4560	4397	4393
15°	4519	4312	4289
20°	4458	4219	4187
25°	4388	4114	4074
30°	4313	4011	3959
35°	4227	3903	3858
40°	4160	3802	3753
45°	4059	3708	3663
50°	3973	3600	3567
55°	3884	3499	3454
60°	3746	3369	3353
65°	3597	3231	3227
70°	3414	3072	3080
75°	3157	2896	2948
80°	2873	2730	2819
85°	2514	2579	2742



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.6	0.8
10°-20°	153.7	2.4
20°-30°	232.4	3.7
30°-40°	281.2	4.4
40°-50°	297.3	4.7
50°-60°	279.8	4.4
60°-70°	232.1	3.7
70°-80°	163.1	2.6
80°-90°	96.9	1.5
90°-100°	159.6	2.5
100°-110°	351.1	5.5
110°-120°	554.3	8.7
120°-130°	710.4	11.2
130°-140°	787.2	12.4
140°-150°	768.4	12.1
150°-160°	645.2	10.2
160°-170°	429.2	6.8
170°-180°	150.3	2.4
0°-30°	439.8	6.9
0°-40°	721.0	11.4
0°-60°	1298.1	20.5
0°-90°	1790.3	28.2
90°-120°	1065.0	16.8
90°-150°	3331.1	52.5
90°-180°	4556.0	71.8
0°-180°	6346.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	567	565	561	566	565	54
15°	544	544	542	548	548	153
25°	497	501	503	510	511	229
35°	435	443	449	458	460	272
45°	363	375	387	397	401	280
55°	284	298	317	329	333	253
65°	197	217	239	254	260	195
75°	109	133	159	176	183	116
85°	34	60	89	107	114	36
90°	14	53	90	115	123	11
95°	82	114	149	169	175	89
105°	292	307	334	353	363	310
115°	540	546	563	576	579	532
125°	783	783	797	806	808	698
135°	1008	1015	1020	1027	1028	780
145°	1224	1228	1229	1232	1231	766
155°	1401	1401	1400	1405	1400	645
165°	1526	1522	1520	1526	1522	430
175°	1587	1581	1580	1587	1580	151
180°	1590	1590	1590	1590	1590	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	568.6	568.3	567.9	567.5	567.2	566.6	565.7	564.8	563.9	563.0	563.8
5°	567.2	566.8	566.3	565.9	565.5	564.8	563.8	562.8	561.8	560.8	562.0
7.5°	562.4	562.1	561.8	561.6	561.3	560.8	560.0	559.2	558.3	557.5	558.8
10°	558.3	558.2	558.0	557.9	557.7	557.3	556.6	555.9	555.2	554.5	555.8
12.5°	552.7	552.7	552.7	552.6	552.6	552.4	551.9	551.4	550.9	550.4	551.5
15°	543.7	543.9	544.0	544.1	544.3	544.1	543.7	543.3	542.8	542.4	543.7
17.5°	531.4	531.8	532.2	532.6	533.1	533.3	533.2	533.1	533.0	533.0	534.2
20°	522.8	523.2	523.6	524.1	524.5	524.7	524.9	525.1	525.1	525.3	526.7
22.5°	513.1	513.6	514.2	514.7	515.3	515.7	515.9	516.2	516.4	516.7	518.1
25°	497.4	498.2	499.1	499.9	500.8	501.4	501.8	502.2	502.7	503.1	504.7
27.5°	479.9	481.1	482.3	483.6	484.9	485.8	486.4	487.1	487.7	488.4	489.8
30°	468.2	469.4	470.4	471.6	472.7	473.8	474.7	475.7	476.7	477.8	479.3
32.5°	455.5	456.9	458.2	459.6	461.0	462.2	463.3	464.4	465.5	466.6	468.3
35°	435.2	436.9	438.6	440.3	442.0	443.5	444.9	446.4	447.8	449.1	451.2
37.5°	414.8	416.7	418.7	420.6	422.6	424.4	426.2	428.0	429.7	431.4	433.4
40°	401.6	403.4	405.3	407.1	409.0	410.8	412.8	414.7	416.8	418.7	420.9
42.5°	386.4	388.4	390.4	392.6	394.6	396.8	399.1	401.4	403.7	406.0	408.4
45°	362.9	365.6	368.3	371.0	373.6	376.3	379.0	381.6	384.3	387.0	389.4
47.5°	340.5	343.2	345.9	348.7	351.5	354.4	357.5	360.6	363.7	366.8	369.3
50°	324.2	327.3	330.4	333.5	336.6	339.7	342.8	345.9	349.0	352.1	354.9
52.5°	307.9	311.0	314.1	317.2	320.3	323.7	327.3	330.8	334.4	337.9	340.7
55°	284.2	287.1	290.2	293.1	296.0	299.6	303.9	308.1	312.3	316.6	319.4
57.5°	257.7	261.4	265.1	268.7	272.4	276.3	280.5	284.7	288.9	293.1	296.4
60°	240.4	244.1	247.8	251.4	255.1	259.3	263.9	268.6	273.2	277.9	281.1
62.5°	223.7	227.7	231.7	235.7	239.7	244.0	248.7	253.3	258.0	262.7	265.9
65°	196.7	201.2	205.7	210.2	214.7	219.4	224.1	228.9	233.7	238.6	242.1
67.5°	170.6	175.5	180.3	185.1	189.8	194.8	199.9	205.0	210.2	215.3	218.9
70°	152.9	157.7	162.5	167.3	172.1	177.2	182.5	187.8	193.2	198.6	202.4
72.5°	135.7	140.6	145.4	150.3	155.2	160.5	166.2	171.9	177.7	183.4	187.0
75°	109.1	114.3	119.5	124.7	130.0	135.6	141.5	147.4	153.4	159.2	163.2
77.5°	84.4	89.9	95.5	100.9	106.5	112.3	118.5	124.7	130.9	137.1	141.1
80°	69.1	74.8	80.5	86.1	91.7	97.6	103.9	110.1	116.3	122.5	126.7
82.5°	53.9	59.8	65.6	71.5	77.4	83.4	89.6	95.8	102.0	108.3	112.6
85°	33.6	39.5	45.5	51.4	57.3	63.4	69.8	76.1	82.5	88.8	93.0
87.5°	19.5	25.8	32.2	38.6	44.9	51.4	58.0	64.7	71.3	77.9	82.3
90°	13.9	22.5	31.1	39.8	48.4	56.8	65.1	73.4	81.6	89.8	95.6
92.5°	36.0	44.4	53.0	61.5	70.0	78.1	85.7	93.3	100.9	108.4	113.4
95°	82.0	89.1	96.2	103.4	110.5	117.9	125.6	133.2	141.0	148.6	153.3
97.5°	136.3	142.3	148.3	154.3	160.2	167.1	175.1	183.1	191.0	199.0	203.7
100°	179.1	183.8	188.6	193.4	198.1	204.5	212.5	220.4	228.4	236.3	240.7
102.5°	224.3	228.0	231.6	235.3	239.0	244.6	252.2	259.8	267.4	275.1	279.6
105°	292.1	295.2	298.3	301.4	304.5	309.2	315.5	321.8	328.2	334.4	338.8
107.5°	364.5	367.2	369.8	372.5	375.1	379.0	384.1	389.1	394.3	399.3	403.6
110°	413.2	415.7	418.2	420.8	423.3	426.9	431.5	436.2	440.8	445.6	448.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	463.8	465.7	467.6	469.4	471.2	474.3	478.5	482.7	487.0	491.2	494.2
115°	539.8	541.0	542.3	543.6	544.9	547.5	551.5	555.4	559.4	563.4	566.1
117.5°	612.0	612.9	613.9	614.9	615.9	618.2	622.1	625.9	629.7	633.6	635.5
120°	659.7	661.1	662.7	664.2	665.7	668.1	671.4	674.7	677.9	681.2	682.7
122.5°	709.8	710.3	710.9	711.3	711.9	713.9	717.4	720.8	724.3	727.8	729.7
125°	783.2	783.0	782.9	782.8	782.6	784.2	787.4	790.7	793.9	797.2	799.3
127.5°	850.2	850.8	851.5	852.2	852.9	854.4	856.6	858.9	861.2	863.4	865.4
130°	896.8	897.6	898.2	898.9	899.6	901.1	903.3	905.6	907.8	910.0	912.1
132.5°	945.0	945.5	946.0	946.4	946.9	947.9	949.5	951.1	952.7	954.2	956.1
135°	1008.1	1009.7	1011.4	1013.0	1014.6	1015.9	1016.9	1017.9	1019.0	1019.9	1021.7
137.5°	1077.4	1078.1	1078.6	1079.3	1079.9	1080.7	1081.6	1082.6	1083.5	1084.3	1085.7
140°	1123.6	1124.1	1124.5	1124.9	1125.3	1125.5	1125.7	1125.8	1126.0	1126.1	1127.6
142.5°	1165.5	1166.0	1166.4	1167.0	1167.5	1167.6	1167.3	1167.0	1166.7	1166.4	1168.0
145°	1223.8	1224.7	1225.7	1226.7	1227.6	1228.2	1228.5	1228.8	1229.1	1229.3	1229.9
147.5°	1281.8	1283.0	1284.2	1285.4	1286.5	1287.0	1286.8	1286.5	1286.4	1286.1	1286.1
150°	1317.3	1318.2	1319.2	1320.1	1321.0	1321.5	1321.5	1321.5	1321.5	1321.5	1321.5
152.5°	1350.2	1350.8	1351.4	1352.1	1352.7	1353.2	1353.3	1353.6	1353.8	1354.0	1354.6
155°	1401.4	1401.4	1401.4	1401.4	1401.4	1401.3	1401.0	1400.8	1400.5	1400.2	1401.3
157.5°	1444.7	1444.2	1443.7	1443.2	1442.8	1442.5	1442.4	1442.3	1442.3	1442.3	1443.1
160°	1470.3	1470.0	1469.7	1469.5	1469.2	1468.9	1468.7	1468.4	1468.1	1467.9	1468.7
162.5°	1493.9	1493.2	1492.5	1491.8	1491.0	1490.5	1490.3	1490.0	1489.7	1489.5	1490.9
165°	1525.6	1524.8	1524.0	1523.1	1522.3	1521.7	1521.1	1520.5	1520.0	1519.5	1521.1
167.5°	1550.0	1548.8	1547.7	1546.5	1545.4	1544.8	1544.9	1544.9	1545.0	1545.1	1546.7
170°	1563.7	1562.4	1561.0	1559.6	1558.3	1557.7	1558.0	1558.3	1558.5	1558.8	1560.4
172.5°	1573.5	1572.4	1571.2	1570.1	1569.0	1568.4	1568.5	1568.6	1568.6	1568.6	1570.5
175°	1587.1	1585.7	1584.4	1583.0	1581.6	1580.8	1580.5	1580.2	1580.0	1579.7	1581.6
177.5°	1591.5	1590.4	1589.3	1588.2	1587.1	1586.6	1586.6	1586.6	1586.6	1586.6	1588.1
180°	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	564.6	565.3	566.1	566.5	566.4	566.2	566.1	566.1
5°	563.1	564.2	565.3	565.8	565.7	565.6	565.4	565.2
7.5°	560.1	561.3	562.6	563.2	563.0	562.9	562.7	562.6
10°	557.0	558.3	559.5	560.1	560.0	559.9	559.7	559.5
12.5°	552.8	553.9	555.1	555.6	555.6	555.5	555.5	555.5
15°	544.9	546.3	547.5	548.0	548.0	547.8	547.6	547.5
17.5°	535.5	536.8	538.1	538.7	538.6	538.5	538.3	538.3
20°	528.2	529.5	530.9	531.7	531.7	531.7	531.7	531.7
22.5°	519.5	520.9	522.3	523.2	523.3	523.6	523.8	524.1
25°	506.2	507.8	509.3	510.1	510.3	510.5	510.5	510.7
27.5°	491.3	492.7	494.2	495.0	495.1	495.3	495.5	495.6
30°	480.9	482.4	484.0	484.9	485.1	485.4	485.7	486.0
32.5°	470.1	471.9	473.7	474.7	475.0	475.2	475.6	475.8
35°	453.1	455.1	457.1	458.3	458.7	459.1	459.5	460.0
37.5°	435.5	437.4	439.4	440.7	441.1	441.6	442.0	442.5
40°	423.0	425.1	427.2	428.5	429.1	429.7	430.2	430.8
42.5°	410.7	413.0	415.4	416.8	417.3	417.7	418.2	418.6
45°	391.8	394.2	396.6	398.1	398.8	399.6	400.2	401.0
47.5°	371.8	374.3	376.7	378.4	379.3	380.1	381.0	381.8
50°	357.8	360.6	363.4	365.3	366.1	366.9	367.8	368.6
52.5°	343.6	346.3	349.2	351.0	351.9	352.7	353.5	354.4
55°	322.2	325.1	327.8	329.7	330.5	331.4	332.2	333.0
57.5°	299.8	303.2	306.6	308.6	309.4	310.1	311.0	311.8
60°	284.4	287.6	290.8	293.0	294.2	295.3	296.4	297.6
62.5°	269.1	272.4	275.7	277.8	278.9	280.1	281.2	282.3
65°	245.6	249.2	252.7	254.9	256.1	257.2	258.4	259.5
67.5°	222.5	226.1	229.7	232.0	233.1	234.2	235.3	236.4
70°	206.2	210.0	213.8	216.2	217.2	218.2	219.2	220.1
72.5°	190.7	194.4	198.1	200.5	201.6	202.7	203.8	204.9
75°	167.1	171.0	175.0	177.7	178.9	180.2	181.5	182.7
77.5°	145.2	149.2	153.2	155.9	157.2	158.6	159.9	161.3
80°	130.9	135.1	139.3	142.0	143.2	144.3	145.4	146.6
82.5°	116.9	121.2	125.6	128.4	129.6	130.9	132.1	133.4
85°	97.3	101.5	105.7	108.6	110.0	111.4	112.8	114.2
87.5°	86.7	91.2	95.6	98.4	99.8	101.1	102.5	103.8
90°	101.3	107.0	112.8	116.5	118.1	119.8	121.5	123.2
92.5°	118.4	123.4	128.2	131.5	133.0	134.4	135.8	137.3
95°	157.8	162.5	167.1	170.1	171.4	172.6	173.9	175.1
97.5°	208.4	213.0	217.8	220.7	221.9	223.1	224.3	225.5
100°	245.0	249.4	253.7	256.4	257.4	258.4	259.3	260.3
102.5°	284.0	288.5	292.9	295.8	297.1	298.4	299.8	301.1
105°	343.2	347.5	351.8	355.0	356.9	358.9	360.9	362.8
107.5°	407.8	412.1	416.3	418.9	419.9	420.9	421.8	422.7
110°	450.9	453.6	456.3	458.6	460.6	462.5	464.5	466.4



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CATALOG NUMBER: S124DIW-S575D1560U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	497.3	500.3	503.3	505.4	506.7	508.0	509.3	510.6
115°	569.0	571.9	574.7	576.4	577.2	577.9	578.6	579.3
117.5°	637.6	639.6	641.6	642.9	643.4	644.0	644.6	645.1
120°	684.1	685.5	687.0	688.5	690.2	691.9	693.6	695.3
122.5°	731.6	733.4	735.4	736.3	736.4	736.4	736.5	736.5
125°	801.4	803.6	805.7	806.9	807.2	807.5	807.8	808.1
127.5°	867.4	869.4	871.4	872.6	873.2	873.7	874.2	874.7
130°	914.0	916.1	918.0	918.9	918.7	918.4	918.2	917.9
132.5°	958.0	959.9	961.8	963.0	963.4	963.8	964.2	964.6
135°	1023.4	1025.1	1026.8	1027.6	1027.7	1027.7	1027.7	1027.8
137.5°	1087.0	1088.4	1089.7	1090.9	1091.8	1092.6	1093.5	1094.4
140°	1129.3	1130.8	1132.4	1133.3	1133.8	1134.2	1134.7	1135.1
142.5°	1169.5	1171.1	1172.6	1173.6	1174.2	1174.8	1175.3	1175.8
145°	1230.4	1231.0	1231.6	1231.8	1231.5	1231.3	1231.0	1230.8
147.5°	1285.9	1285.8	1285.7	1285.7	1285.9	1286.1	1286.3	1286.5
150°	1321.5	1321.5	1321.5	1321.4	1321.1	1320.9	1320.6	1320.3
152.5°	1355.3	1355.9	1356.6	1356.6	1355.8	1355.2	1354.5	1353.7
155°	1402.4	1403.5	1404.6	1404.6	1403.5	1402.4	1401.3	1400.2
157.5°	1443.9	1444.7	1445.5	1445.4	1444.5	1443.7	1442.7	1441.8
160°	1469.5	1470.3	1471.1	1470.8	1469.5	1468.1	1466.7	1465.3
162.5°	1492.4	1493.9	1495.3	1495.4	1494.0	1492.7	1491.3	1490.0
165°	1522.7	1524.4	1526.0	1526.3	1525.2	1524.1	1523.0	1521.9
167.5°	1548.3	1550.0	1551.6	1551.6	1549.9	1548.2	1546.5	1544.7
170°	1562.1	1563.7	1565.4	1565.2	1563.3	1561.4	1559.5	1557.5
172.5°	1572.4	1574.2	1576.1	1576.1	1574.1	1572.2	1570.3	1568.4
175°	1583.6	1585.4	1587.4	1587.4	1585.4	1583.6	1581.6	1579.7
177.5°	1589.7	1591.1	1592.7	1592.6	1590.8	1589.1	1587.4	1585.6
180°	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5	1589.5

(END OF REPORT)