

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: P332759-940

Luminaire Tested: **S124DIW-S575D1050U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332759-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S575D1050U940-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5852.3 lumens
Efficiency: N/A
Efficacy: 129.5 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

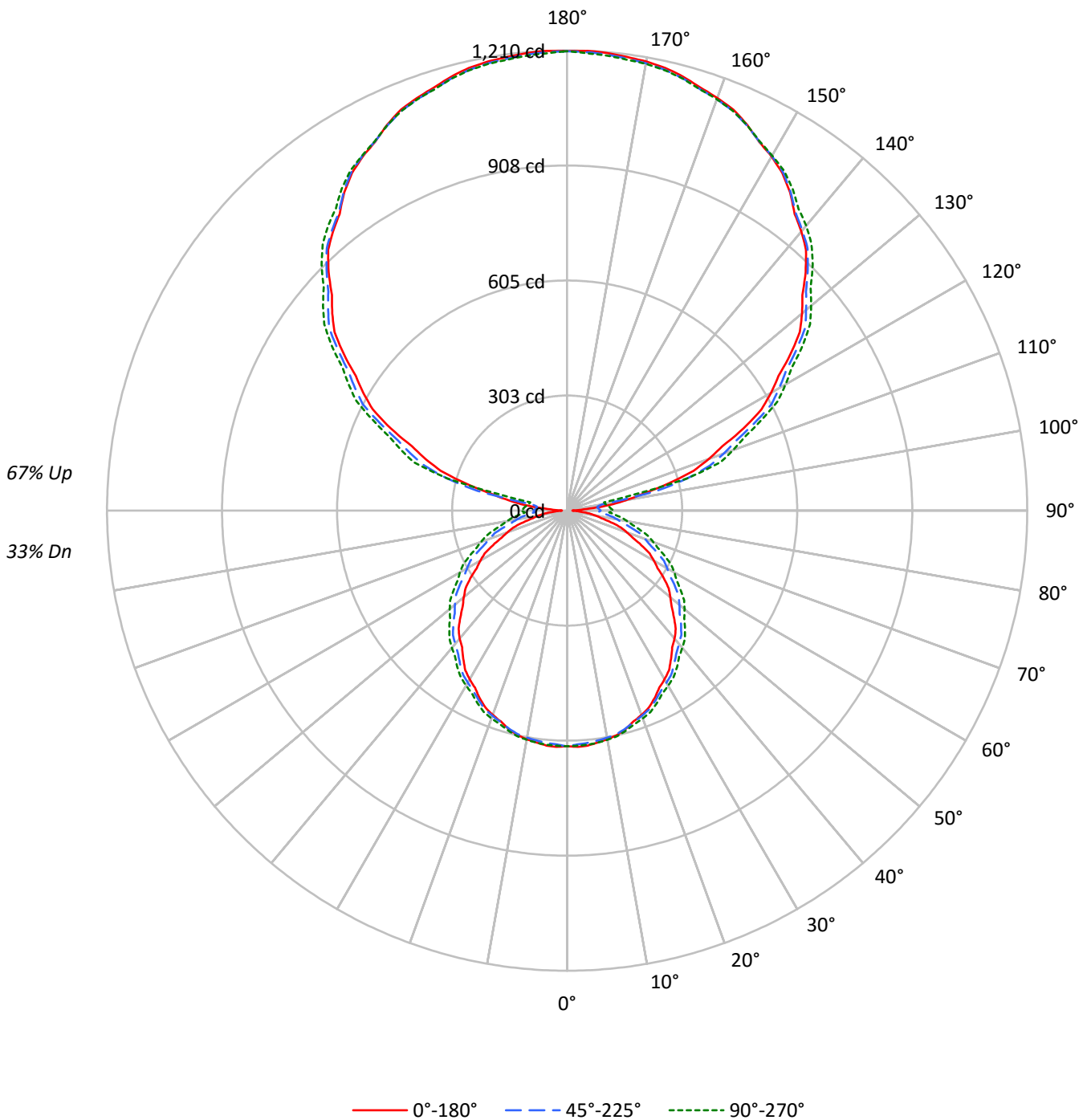
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	74	74	74	57	57	57	41	41	41	33
1	93	89	85	81	84	80	77	74	64	61	59	49	47	46	35	34	33	27
2	85	77	71	66	76	70	64	60	55	52	48	42	40	38	30	29	27	22
3	77	68	60	54	69	61	55	50	49	44	40	37	34	31	27	25	23	18
4	70	60	52	46	63	54	47	42	43	38	34	33	30	27	24	21	20	15
5	64	53	45	39	58	48	41	36	38	33	29	29	26	23	21	19	17	13
6	59	47	39	33	53	43	36	31	34	29	25	27	23	20	19	17	15	11
7	55	42	35	29	49	38	32	27	31	26	22	24	20	17	17	15	13	10
8	51	38	31	25	45	35	28	23	28	23	19	22	18	15	16	13	12	9
9	47	35	27	22	42	32	25	21	26	21	17	20	16	14	15	12	10	8
10	44	32	25	20	39	29	23	18	24	19	15	18	15	12	14	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5002	5002	5002
5°	5018	4889	4903
10°	4987	4809	4805
15°	4943	4717	4690
20°	4875	4614	4579
25°	4799	4500	4456
30°	4717	4386	4330
35°	4624	4269	4220
40°	4550	4158	4105
45°	4439	4056	4005
50°	4344	3938	3901
55°	4249	3827	3778
60°	4098	3685	3667
65°	3933	3533	3529
70°	3733	3359	3369
75°	3453	3169	3224
80°	3143	2984	3082
85°	2746	2820	2999



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.7	1.0
10°-20°	168.1	2.9
20°-30°	254.2	4.3
30°-40°	307.6	5.3
40°-50°	325.2	5.6
50°-60°	306.0	5.2
60°-70°	253.9	4.3
70°-80°	178.3	3.0
80°-90°	104.3	1.8
90°-100°	101.2	1.7
100°-110°	307.7	5.3
110°-120°	533.7	9.1
120°-130°	656.5	11.2
130°-140°	691.7	11.8
140°-150°	641.5	11.0
150°-160°	516.1	8.8
160°-170°	332.9	5.7
170°-180°	114.7	2.0
0°-30°	481.0	8.2
0°-40°	788.6	13.5
0°-60°	1419.8	24.3
0°-90°	1956.3	33.4
90°-120°	942.6	16.1
90°-150°	2932.2	50.1
90°-180°	3896.0	66.6
0°-180°	5852.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	620	620	620	620	620	
5°	620	618	613	619	618	59
15°	595	595	593	599	599	167
25°	544	548	550	558	559	250
35°	476	484	491	501	503	298
45°	397	410	423	435	438	307
55°	311	326	346	360	364	277
65°	215	237	261	278	284	213
75°	119	145	174	193	200	127
85°	37	66	97	117	125	39
90°	14	51	88	113	122	10
95°	59	53	80	103	112	71
105°	278	298	328	350	326	292
115°	512	522	542	559	564	504
125°	716	720	735	750	756	640
135°	887	886	894	907	913	683
145°	1022	1024	1024	1029	1033	638
155°	1119	1120	1118	1121	1118	516
165°	1181	1177	1176	1183	1175	334
175°	1208	1203	1204	1210	1201	115
180°	1208	1208	1208	1208	1208	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	621.9	621.5	621.2	620.7	620.4	619.7	618.8	617.8	616.7	615.7	616.6
5°	620.4	619.9	619.4	618.9	618.5	617.7	616.6	615.5	614.5	613.4	614.7
7.5°	615.1	614.7	614.5	614.2	613.9	613.4	612.5	611.6	610.6	609.8	611.2
10°	610.6	610.5	610.3	610.2	610.0	609.6	608.8	608.0	607.3	606.5	607.9
12.5°	604.5	604.5	604.5	604.4	604.4	604.1	603.6	603.1	602.5	602.0	603.2
15°	594.7	594.9	594.9	595.1	595.3	595.1	594.7	594.2	593.7	593.3	594.7
17.5°	581.2	581.7	582.1	582.6	583.1	583.3	583.2	583.1	583.0	582.9	584.2
20°	571.8	572.2	572.7	573.2	573.6	573.9	574.1	574.3	574.4	574.5	576.0
22.5°	561.2	561.8	562.4	562.9	563.6	564.0	564.3	564.5	564.8	565.1	566.7
25°	544.0	544.9	545.9	546.8	547.7	548.4	548.8	549.3	549.8	550.3	552.0
27.5°	524.9	526.2	527.5	529.0	530.3	531.3	532.0	532.7	533.4	534.1	535.7
30°	512.1	513.4	514.5	515.8	517.0	518.2	519.2	520.3	521.4	522.5	524.2
32.5°	498.2	499.7	501.1	502.7	504.2	505.5	506.7	507.9	509.1	510.3	512.2
35°	476.0	477.9	479.7	481.5	483.4	485.1	486.6	488.2	489.7	491.2	493.5
37.5°	453.7	455.8	457.9	460.0	462.2	464.2	466.1	468.1	469.9	471.8	474.0
40°	439.3	441.2	443.3	445.2	447.3	449.3	451.5	453.6	455.8	458.0	460.3
42.5°	422.6	424.8	427.0	429.4	431.6	434.0	436.5	439.0	441.6	444.1	446.7
45°	396.9	399.8	402.8	405.7	408.6	411.5	414.5	417.4	420.4	423.3	425.9
47.5°	372.4	375.3	378.4	381.4	384.4	387.6	391.0	394.4	397.8	401.2	403.9
50°	354.5	357.9	361.3	364.8	368.2	371.6	375.0	378.4	381.7	385.1	388.2
52.5°	336.8	340.2	343.6	347.0	350.4	354.0	357.9	361.8	365.7	369.5	372.6
55°	310.9	314.1	317.4	320.6	323.8	327.7	332.3	337.0	341.6	346.3	349.4
57.5°	281.9	285.9	289.9	293.9	297.9	302.2	306.7	311.4	316.0	320.6	324.2
60°	263.0	267.0	271.0	275.0	279.0	283.6	288.6	293.7	298.8	303.9	307.5
62.5°	244.7	249.1	253.4	257.8	262.2	266.9	272.0	277.1	282.2	287.3	290.8
65°	215.1	220.1	225.0	229.9	234.9	240.0	245.1	250.4	255.7	260.9	264.7
67.5°	186.6	191.9	197.2	202.4	207.6	213.0	218.6	224.3	229.9	235.5	239.4
70°	167.2	172.5	177.7	183.0	188.2	193.8	199.6	205.5	211.3	217.2	221.3
72.5°	148.4	153.7	159.1	164.4	169.8	175.6	181.8	188.1	194.3	200.5	204.6
75°	119.3	125.0	130.7	136.4	142.1	148.3	154.7	161.2	167.7	174.2	178.5
77.5°	92.3	98.4	104.4	110.4	116.5	122.9	129.7	136.4	143.2	150.0	154.4
80°	75.6	81.8	88.0	94.2	100.3	106.7	113.6	120.4	127.2	133.9	138.6
82.5°	58.9	65.4	71.8	78.2	84.6	91.2	98.0	104.8	111.6	118.4	123.1
85°	36.7	43.2	49.8	56.2	62.7	69.4	76.3	83.3	90.2	97.1	101.7
87.5°	21.0	27.8	34.5	41.3	48.0	54.9	62.0	69.1	76.2	83.2	87.9
90°	13.8	22.2	30.6	39.0	47.3	55.6	63.8	72.1	80.3	88.5	94.3
92.5°	21.9	27.6	33.3	39.0	44.6	51.5	59.8	68.0	76.2	84.5	90.1
95°	58.7	57.0	55.2	53.5	51.7	54.1	60.6	67.2	73.7	80.3	85.6
97.5°	113.7	122.3	131.0	139.6	148.3	144.5	128.3	112.2	96.0	79.9	84.1
100°	155.8	163.5	171.0	178.7	186.3	179.2	157.6	135.9	114.1	92.5	93.3
102.5°	203.5	209.6	215.8	222.0	228.2	232.4	234.7	236.9	239.2	241.5	208.7
105°	278.2	282.5	286.8	291.1	295.3	300.9	307.6	314.2	320.9	327.7	333.3
107.5°	348.7	351.9	355.0	358.1	361.2	366.1	372.9	379.7	386.5	393.2	397.9
110°	395.8	398.6	401.4	404.1	406.9	411.6	418.2	424.8	431.4	438.0	441.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	441.6	444.5	447.5	450.6	453.5	457.9	463.6	469.3	475.0	480.7	484.1
115°	511.9	513.9	515.9	517.9	519.9	523.3	528.0	532.7	537.4	542.2	546.0
117.5°	576.0	577.6	579.2	580.9	582.5	585.8	590.8	595.8	600.9	605.9	609.0
120°	618.8	620.0	621.3	622.5	623.8	626.5	630.8	635.1	639.4	643.6	647.1
122.5°	659.2	659.8	660.3	660.9	661.5	664.1	668.5	673.1	677.5	682.1	685.4
125°	716.5	717.2	717.8	718.5	719.1	721.1	724.6	728.1	731.6	734.9	738.5
127.5°	771.3	771.3	771.4	771.4	771.5	773.5	777.3	781.2	785.1	789.0	791.7
130°	806.2	806.2	806.3	806.3	806.4	807.9	811.0	814.0	817.1	820.2	823.1
132.5°	838.7	838.9	839.1	839.3	839.5	841.0	843.7	846.5	849.2	851.9	854.8
135°	886.8	886.5	886.4	886.2	886.0	886.8	888.7	890.6	892.4	894.4	897.2
137.5°	930.0	929.9	929.8	929.8	929.7	930.3	931.7	933.2	934.6	935.9	938.7
140°	958.1	958.4	958.7	958.9	959.1	959.6	960.1	960.6	961.2	961.8	964.4
142.5°	982.9	983.6	984.3	985.0	985.7	986.1	986.2	986.4	986.5	986.7	988.9
145°	1021.6	1022.1	1022.5	1023.0	1023.4	1023.6	1023.6	1023.6	1023.6	1023.6	1024.8
147.5°	1052.5	1053.5	1054.4	1055.4	1056.4	1056.8	1056.6	1056.4	1056.1	1056.0	1056.2
150°	1074.9	1075.6	1076.2	1076.8	1077.5	1077.7	1077.5	1077.4	1077.1	1076.9	1076.9
152.5°	1093.1	1093.8	1094.4	1095.0	1095.6	1095.7	1095.4	1095.0	1094.7	1094.3	1094.6
155°	1119.4	1119.6	1119.8	1120.0	1120.2	1120.0	1119.4	1118.8	1118.2	1117.6	1118.4
157.5°	1141.7	1141.5	1141.4	1141.2	1141.1	1140.8	1140.1	1139.3	1138.7	1138.0	1139.1
160°	1154.6	1154.1	1153.4	1152.8	1152.2	1151.8	1151.6	1151.4	1151.2	1151.0	1152.2
162.5°	1166.2	1165.5	1164.7	1163.9	1163.1	1162.6	1162.4	1162.3	1162.1	1161.8	1163.1
165°	1180.8	1179.8	1178.8	1177.8	1176.8	1176.3	1176.3	1176.3	1176.3	1176.3	1177.9
167.5°	1192.4	1191.3	1190.3	1189.3	1188.2	1187.7	1187.5	1187.4	1187.3	1187.1	1188.9
170°	1198.9	1197.7	1196.5	1195.2	1194.1	1193.6	1193.7	1194.0	1194.2	1194.4	1196.0
172.5°	1203.2	1202.0	1200.8	1199.6	1198.4	1197.9	1198.1	1198.3	1198.5	1198.7	1200.3
175°	1207.9	1206.8	1205.5	1204.3	1203.1	1202.7	1202.8	1203.0	1203.2	1203.5	1205.2
177.5°	1210.1	1209.0	1207.8	1206.8	1205.6	1205.2	1205.5	1205.9	1206.1	1206.5	1207.7
180°	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	617.5	618.3	619.2	619.6	619.5	619.3	619.2	619.1
5°	615.9	617.1	618.3	618.8	618.8	618.6	618.4	618.2
7.5°	612.6	613.9	615.4	616.0	615.8	615.6	615.5	615.4
10°	609.2	610.6	612.0	612.6	612.5	612.3	612.2	612.0
12.5°	604.6	605.8	607.1	607.7	607.7	607.6	607.6	607.6
15°	596.0	597.4	598.8	599.4	599.3	599.1	599.0	598.8
17.5°	585.7	587.1	588.5	589.2	589.1	589.0	588.8	588.7
20°	577.7	579.2	580.7	581.5	581.5	581.5	581.5	581.5
22.5°	568.2	569.7	571.2	572.2	572.4	572.7	572.9	573.2
25°	553.7	555.4	557.1	557.9	558.1	558.3	558.4	558.6
27.5°	537.3	538.9	540.5	541.4	541.5	541.7	541.9	542.1
30°	525.9	527.6	529.3	530.3	530.6	530.9	531.2	531.5
32.5°	514.2	516.1	518.1	519.2	519.5	519.8	520.1	520.4
35°	495.6	497.8	499.9	501.2	501.7	502.1	502.6	503.1
37.5°	476.3	478.4	480.6	482.0	482.4	483.0	483.4	483.9
40°	462.6	464.9	467.3	468.7	469.3	469.9	470.6	471.2
42.5°	449.2	451.7	454.3	455.8	456.4	456.8	457.4	457.8
45°	428.6	431.1	433.7	435.4	436.2	437.0	437.7	438.5
47.5°	406.6	409.4	412.1	413.8	414.8	415.7	416.7	417.6
50°	391.3	394.4	397.4	399.5	400.4	401.3	402.3	403.1
52.5°	375.8	378.8	381.9	383.9	384.9	385.8	386.6	387.6
55°	352.4	355.5	358.6	360.6	361.5	362.5	363.4	364.3
57.5°	327.9	331.6	335.3	337.5	338.4	339.2	340.1	341.0
60°	311.0	314.6	318.1	320.5	321.7	323.0	324.2	325.5
62.5°	294.4	297.9	301.5	303.8	305.1	306.3	307.6	308.8
65°	268.6	272.5	276.3	278.8	280.1	281.3	282.6	283.8
67.5°	243.3	247.3	251.2	253.7	254.9	256.1	257.3	258.5
70°	225.5	229.7	233.8	236.5	237.6	238.6	239.7	240.8
72.5°	208.6	212.7	216.7	219.3	220.5	221.7	222.9	224.1
75°	182.8	187.1	191.5	194.3	195.6	197.1	198.5	199.8
77.5°	158.8	163.2	167.6	170.5	171.9	173.4	174.9	176.4
80°	143.2	147.8	152.4	155.3	156.6	157.8	159.1	160.3
82.5°	127.9	132.6	137.4	140.4	141.8	143.1	144.5	145.9
85°	106.4	111.0	115.7	118.8	120.3	121.8	123.3	124.9
87.5°	92.6	97.4	102.1	105.1	106.6	108.0	109.4	110.9
90°	100.0	105.6	111.3	114.9	116.5	118.2	119.8	121.5
92.5°	95.6	101.2	106.7	110.1	111.5	112.8	114.1	115.4
95°	91.0	96.3	101.7	105.2	106.8	108.3	109.9	111.6
97.5°	88.3	92.4	96.6	99.4	100.9	102.5	104.0	105.5
100°	94.0	94.7	95.5	96.5	97.8	99.1	100.3	101.7
102.5°	175.9	143.1	110.4	94.6	95.9	97.1	98.4	99.6
105°	339.0	344.6	350.4	350.2	344.2	338.1	332.2	326.2
107.5°	402.6	407.2	411.9	415.2	417.1	418.9	420.8	422.7
110°	445.9	449.8	453.8	456.6	458.5	460.3	462.2	464.0



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CATALOG NUMBER: S124DIW-S575D1050U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	487.4	490.8	494.1	496.8	498.7	500.8	502.7	504.8
115°	549.7	553.6	557.3	559.8	560.9	562.0	563.0	564.1
117.5°	612.2	615.3	618.5	620.6	621.7	622.9	624.0	625.2
120°	650.6	654.1	657.5	659.8	660.6	661.4	662.3	663.1
122.5°	688.8	692.1	695.4	697.4	698.1	698.8	699.5	700.2
125°	742.0	745.6	749.1	751.4	752.5	753.7	754.8	755.9
127.5°	794.3	796.9	799.6	801.4	802.3	803.2	804.1	804.9
130°	826.2	829.1	832.1	834.0	835.0	835.9	836.8	837.8
132.5°	857.6	860.5	863.4	865.1	865.9	866.7	867.5	868.2
135°	900.1	902.9	905.8	907.9	909.3	910.6	911.9	913.2
137.5°	941.4	944.1	946.7	948.4	949.0	949.7	950.4	951.0
140°	967.0	969.6	972.2	974.0	975.0	975.9	976.9	977.9
142.5°	991.0	993.3	995.5	996.9	997.6	998.3	999.0	999.7
145°	1025.9	1027.0	1028.1	1029.2	1030.2	1031.3	1032.2	1033.3
147.5°	1056.5	1056.9	1057.1	1057.6	1058.3	1059.0	1059.7	1060.3
150°	1076.9	1076.9	1076.9	1077.0	1077.2	1077.5	1077.6	1077.8
152.5°	1094.9	1095.2	1095.6	1095.6	1095.6	1095.4	1095.3	1095.2
155°	1119.2	1120.0	1120.8	1120.9	1120.3	1119.7	1119.1	1118.5
157.5°	1140.1	1141.1	1142.2	1142.2	1141.1	1140.1	1139.1	1138.0
160°	1153.4	1154.6	1155.8	1155.8	1154.6	1153.4	1152.2	1151.0
162.5°	1164.2	1165.5	1166.6	1166.6	1165.2	1163.9	1162.5	1161.1
165°	1179.6	1181.2	1182.8	1182.6	1180.8	1179.0	1177.2	1175.4
167.5°	1190.7	1192.5	1194.2	1194.1	1192.1	1190.1	1188.1	1186.1
170°	1197.6	1199.2	1200.8	1200.6	1198.5	1196.6	1194.5	1192.6
172.5°	1201.9	1203.5	1205.1	1204.9	1202.7	1200.5	1198.4	1196.1
175°	1207.0	1208.8	1210.7	1210.3	1207.9	1205.5	1203.1	1200.7
177.5°	1209.1	1210.3	1211.7	1211.3	1209.3	1207.5	1205.5	1203.6
180°	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9

(END OF REPORT)