

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: P332655-927

Luminaire Tested: **S124DIP-S1020D1035U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332655-927
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: S124DIP-S1020D1035U927-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1020 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6607.8 lumens
Efficiency: N/A
Efficacy: 109.2 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: General Diffuse

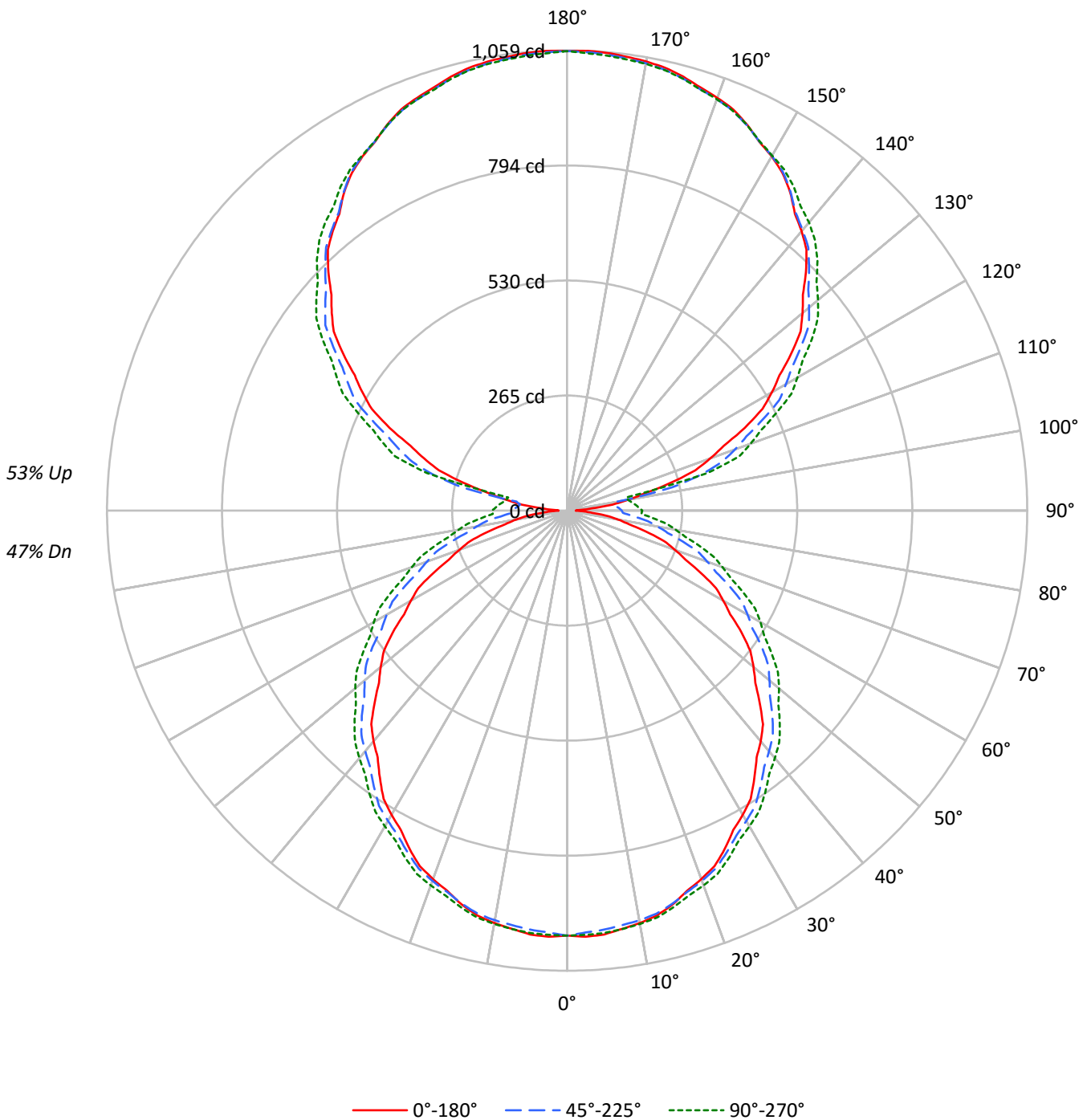
Input Watts (W): 60.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332655-927

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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	106	106	106	106	98	98	98	98	81	81	81	67	67	67	53	53	53	47
1	96	91	87	83	88	84	80	77	70	67	65	57	55	54	45	44	43	37
2	87	79	73	67	80	73	67	62	61	57	53	50	47	44	39	37	35	31
3	79	69	62	56	72	64	57	52	53	48	44	44	40	37	35	32	30	25
4	72	61	53	47	66	56	49	43	47	42	37	39	34	31	31	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	28	24	22	18
6	61	49	40	34	56	45	37	32	38	32	28	31	27	23	25	22	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	13
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	14	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7896	7896	7896
5°	7920	7717	7739
10°	7872	7591	7585
15°	7802	7444	7404
20°	7695	7284	7227
25°	7575	7102	7034
30°	7445	6922	6835
35°	7299	6739	6660
40°	7181	6564	6478
45°	7007	6402	6322
50°	6859	6215	6158
55°	6707	6040	5964
60°	6469	5816	5788
65°	6208	5578	5571
70°	5894	5303	5319
75°	5453	5001	5089
80°	4964	4711	4865
85°	4347	4456	4735



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.6	1.4
10°-20°	265.4	4.0
20°-30°	401.3	6.1
30°-40°	485.5	7.3
40°-50°	513.3	7.8
50°-60°	483.1	7.3
60°-70°	400.8	6.1
70°-80°	281.5	4.3
80°-90°	162.2	2.5
90°-100°	130.7	2.0
100°-110°	300.5	4.5
110°-120°	488.0	7.4
120°-130°	586.4	8.9
130°-140°	610.5	9.2
140°-150°	562.5	8.5
150°-160°	451.8	6.8
160°-170°	291.4	4.4
170°-180°	100.4	1.5
0°-30°	759.3	11.5
0°-40°	1244.8	18.8
0°-60°	2241.1	33.9
0°-90°	3085.6	46.7
90°-120°	919.2	13.9
90°-150°	2678.7	40.5
90°-180°	3522.0	53.3
0°-180°	6607.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	978	978	978	978	978	
5°	979	976	968	976	976	93
15°	939	940	936	946	945	264
25°	859	865	868	880	882	395
35°	751	764	776	790	794	470
45°	626	647	668	686	692	484
55°	491	514	546	568	575	437
65°	340	375	412	438	448	336
75°	188	229	275	304	315	200
85°	58	104	153	185	197	62
90°	20	72	126	161	173	14
95°	58	69	113	146	158	67
105°	248	276	319	350	334	260
115°	451	464	498	522	531	444
125°	629	633	657	679	688	562
135°	777	777	787	806	814	599
145°	895	896	896	903	909	559
155°	980	980	978	981	979	452
165°	1034	1030	1030	1035	1029	292
175°	1057	1053	1053	1060	1051	101
180°	1057	1057	1057	1057	1057	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1
2.5°	981.6	981.0	980.4	979.9	979.2	978.2	976.6	975.1	973.5	971.9	973.3
5°	979.1	978.4	977.7	977.0	976.3	975.0	973.4	971.6	969.9	968.2	970.2
7.5°	970.8	970.4	969.9	969.6	969.1	968.2	966.8	965.4	963.9	962.5	964.7
10°	963.8	963.6	963.4	963.1	962.9	962.1	960.9	959.7	958.5	957.3	959.5
12.5°	954.2	954.2	954.1	954.0	954.0	953.5	952.8	951.9	951.1	950.2	952.3
15°	938.7	938.9	939.1	939.4	939.6	939.4	938.7	937.9	937.2	936.4	938.7
17.5°	917.4	918.1	918.9	919.6	920.4	920.6	920.4	920.4	920.2	920.0	922.3
20°	902.5	903.2	904.0	904.7	905.5	905.9	906.2	906.4	906.7	906.9	909.3
22.5°	885.8	886.8	887.7	888.7	889.5	890.3	890.7	891.1	891.5	892.0	894.5
25°	858.7	860.2	861.6	863.1	864.5	865.6	866.3	867.1	867.8	868.5	871.2
27.5°	828.5	830.6	832.7	834.9	837.0	838.7	839.8	840.9	842.0	843.1	845.7
30°	808.3	810.2	812.2	814.1	816.1	817.9	819.6	821.3	823.0	824.7	827.4
32.5°	786.4	788.8	791.1	793.4	795.7	797.9	799.8	801.7	803.6	805.5	808.5
35°	751.4	754.3	757.2	760.1	763.0	765.7	768.2	770.6	773.0	775.5	778.9
37.5°	716.1	719.5	722.8	726.2	729.5	732.7	735.7	738.7	741.8	744.8	748.2
40°	693.3	696.5	699.7	702.8	706.0	709.2	712.6	716.1	719.5	722.9	726.5
42.5°	667.0	670.6	674.1	677.7	681.2	685.0	689.0	693.0	697.0	701.0	705.0
45°	626.5	631.1	635.7	640.4	645.0	649.6	654.3	658.9	663.5	668.1	672.2
47.5°	587.7	592.5	597.2	602.1	606.8	611.9	617.2	622.6	628.0	633.3	637.5
50°	559.7	565.1	570.4	575.8	581.1	586.5	591.8	597.1	602.5	607.8	612.8
52.5°	531.6	537.0	542.3	547.7	553.1	558.8	564.9	571.1	577.2	583.4	588.2
55°	490.7	495.8	500.9	506.0	511.1	517.3	524.7	532.0	539.2	546.5	551.4
57.5°	444.9	451.2	457.6	463.9	470.2	477.0	484.3	491.5	498.8	506.0	511.8
60°	415.1	421.4	427.8	434.1	440.5	447.6	455.7	463.7	471.7	479.7	485.3
62.5°	386.2	393.1	400.1	406.9	413.8	421.3	429.4	437.4	445.4	453.4	459.1
65°	339.5	347.3	355.1	362.9	370.7	378.7	387.0	395.3	403.5	411.9	417.9
67.5°	294.6	302.9	311.2	319.5	327.7	336.3	345.2	354.0	362.9	371.8	378.0
70°	264.0	272.3	280.5	288.8	297.1	305.9	315.1	324.3	333.6	342.9	349.4
72.5°	234.2	242.6	251.1	259.6	268.1	277.2	287.0	296.8	306.7	316.6	322.9
75°	188.4	197.4	206.4	215.4	224.4	234.0	244.2	254.4	264.7	274.9	281.7
77.5°	145.7	155.2	164.8	174.3	183.9	193.9	204.7	215.4	226.1	236.8	243.7
80°	119.4	129.1	138.9	148.6	158.4	168.6	179.3	190.0	200.7	211.4	218.7
82.5°	93.1	103.2	113.4	123.5	133.6	144.0	154.7	165.4	176.2	186.9	194.3
85°	58.1	68.3	78.5	88.7	98.9	109.6	120.5	131.4	142.4	153.4	160.7
87.5°	32.9	43.2	53.6	63.8	74.1	84.8	95.7	106.7	117.6	128.6	135.9
90°	19.9	31.5	43.3	54.9	66.5	78.3	90.2	102.1	114.0	125.8	134.0
92.5°	26.6	35.5	44.4	53.2	62.1	72.5	84.3	96.2	108.1	119.9	127.9
95°	57.8	59.8	61.9	63.9	66.0	72.1	82.2	92.4	102.5	112.6	120.3
97.5°	105.3	115.9	126.6	137.2	147.8	148.3	138.6	128.8	119.1	109.4	115.9
100°	141.7	151.2	160.7	170.2	179.7	177.1	162.3	147.6	132.8	118.0	121.6
102.5°	183.5	191.4	199.2	207.1	215.0	222.0	228.1	234.2	240.3	246.5	220.6
105°	247.9	253.8	259.8	265.7	271.6	279.5	289.4	299.3	309.1	319.0	326.7
107.5°	309.5	314.0	318.5	323.1	327.6	334.7	344.4	354.1	363.8	373.6	380.3
110°	350.4	354.3	358.2	362.2	366.1	372.9	382.5	392.1	401.6	411.1	417.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	390.0	394.0	397.9	401.9	405.8	412.2	420.8	429.4	438.0	446.6	452.0
115°	451.0	453.8	456.5	459.1	461.8	467.1	474.7	482.3	489.9	497.5	503.2
117.5°	506.9	509.0	511.0	513.0	515.0	519.8	527.4	535.1	542.7	550.4	555.4
120°	544.0	545.4	546.9	548.3	549.8	553.9	560.8	567.7	574.6	581.5	586.7
122.5°	579.5	580.0	580.6	581.1	581.7	585.4	592.4	599.3	606.2	613.1	618.2
125°	629.2	629.5	630.0	630.5	631.0	634.1	639.8	645.5	651.3	657.0	662.1
127.5°	677.0	676.9	676.8	676.8	676.7	679.5	684.9	690.4	695.9	701.3	705.6
130°	707.1	707.0	706.9	706.9	706.9	709.0	713.4	717.9	722.3	726.7	731.3
132.5°	735.5	735.6	735.7	735.8	735.9	737.8	741.6	745.4	749.2	753.0	757.3
135°	777.2	777.0	776.8	776.7	776.5	777.6	780.0	782.4	784.8	787.2	791.5
137.5°	815.0	814.8	814.6	814.4	814.3	815.0	816.6	818.2	819.8	821.4	825.4
140°	839.6	839.8	839.9	840.0	840.1	840.4	841.1	841.6	842.2	842.8	846.5
142.5°	860.9	861.5	862.1	862.7	863.2	863.6	863.6	863.7	863.8	863.9	867.0
145°	894.7	895.0	895.2	895.6	895.9	896.0	896.0	896.0	896.0	896.0	897.6
147.5°	921.8	922.5	923.2	924.0	924.7	925.0	924.8	924.6	924.5	924.3	924.6
150°	941.4	941.8	942.3	942.8	943.2	943.3	943.2	943.0	942.9	942.6	942.6
152.5°	957.0	957.4	958.0	958.5	959.0	959.1	958.8	958.5	958.1	957.8	958.1
155°	979.9	980.0	980.2	980.3	980.5	980.3	979.9	979.3	978.7	978.3	978.9
157.5°	999.3	999.2	999.0	998.9	998.9	998.5	997.9	997.3	996.7	996.1	997.0
160°	1010.7	1010.1	1009.6	1009.1	1008.5	1008.2	1008.1	1007.8	1007.7	1007.5	1008.5
162.5°	1020.8	1020.1	1019.5	1018.7	1018.1	1017.7	1017.5	1017.3	1017.2	1017.0	1018.0
165°	1033.6	1032.7	1031.8	1030.9	1030.1	1029.6	1029.6	1029.6	1029.6	1029.6	1031.0
167.5°	1043.7	1042.8	1041.9	1041.0	1040.1	1039.6	1039.4	1039.3	1039.3	1039.1	1040.7
170°	1049.4	1048.4	1047.3	1046.2	1045.2	1044.7	1044.9	1045.1	1045.3	1045.4	1046.9
172.5°	1053.2	1052.2	1051.1	1050.0	1049.0	1048.5	1048.7	1048.9	1049.1	1049.2	1050.7
175°	1057.3	1056.3	1055.2	1054.2	1053.1	1052.7	1052.8	1053.0	1053.2	1053.4	1054.9
177.5°	1059.2	1058.2	1057.2	1056.3	1055.3	1054.9	1055.2	1055.5	1055.7	1056.1	1057.2
180°	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	978.1	978.1	978.1	978.1	978.1	978.1	978.1	978.1
2.5°	974.7	976.0	977.4	977.9	977.8	977.6	977.4	977.2
5°	972.1	974.1	976.0	976.8	976.6	976.4	976.1	975.9
7.5°	966.9	969.1	971.3	972.2	972.0	971.8	971.5	971.3
10°	961.6	963.8	966.1	967.0	966.8	966.5	966.3	966.1
12.5°	954.3	956.2	958.2	959.3	959.2	959.1	959.1	959.0
15°	940.9	943.0	945.2	946.2	945.9	945.7	945.5	945.2
17.5°	924.5	926.8	929.0	930.0	929.8	929.6	929.4	929.2
20°	911.7	914.2	916.6	917.8	917.8	917.8	917.8	917.8
22.5°	896.8	899.3	901.7	903.2	903.6	903.9	904.3	904.7
25°	873.9	876.5	879.2	880.7	881.0	881.2	881.5	881.7
27.5°	848.1	850.6	853.1	854.4	854.8	855.1	855.3	855.6
30°	830.1	832.7	835.4	837.0	837.5	838.0	838.5	839.0
32.5°	811.6	814.7	817.8	819.5	820.0	820.5	820.9	821.5
35°	782.3	785.7	789.1	791.2	791.9	792.6	793.4	794.1
37.5°	751.7	755.2	758.6	760.7	761.5	762.3	763.0	763.8
40°	730.2	733.8	737.5	739.8	740.8	741.7	742.8	743.7
42.5°	709.1	713.1	717.2	719.5	720.3	721.1	721.9	722.6
45°	676.4	680.6	684.7	687.4	688.6	689.8	691.0	692.2
47.5°	641.8	646.1	650.5	653.3	654.7	656.2	657.7	659.2
50°	617.6	622.5	627.3	630.5	632.0	633.4	634.9	636.4
52.5°	593.1	597.9	602.9	605.9	607.4	608.9	610.4	611.8
55°	556.3	561.2	566.0	569.2	570.6	572.1	573.5	575.0
57.5°	517.6	523.4	529.2	532.7	534.1	535.5	536.9	538.2
60°	490.9	496.5	502.1	505.9	507.9	509.8	511.7	513.7
62.5°	464.6	470.2	475.9	479.6	481.6	483.5	485.4	487.4
65°	424.0	430.1	436.2	440.2	442.1	444.1	446.0	448.0
67.5°	384.1	390.3	396.5	400.5	402.4	404.3	406.2	408.1
70°	355.9	362.5	369.1	373.3	374.9	376.7	378.3	380.1
72.5°	329.3	335.6	342.1	346.2	348.1	350.0	351.9	353.8
75°	288.5	295.3	302.1	306.7	308.9	311.1	313.2	315.4
77.5°	250.6	257.5	264.4	269.1	271.4	273.8	276.1	278.5
80°	226.0	233.3	240.6	245.2	247.2	249.1	251.0	253.0
82.5°	201.8	209.4	216.8	221.7	223.8	225.9	228.1	230.2
85°	167.9	175.2	182.5	187.4	189.9	192.3	194.7	197.2
87.5°	143.1	150.4	157.6	162.4	164.6	166.8	169.1	171.2
90°	142.0	150.2	158.3	163.5	165.8	168.1	170.4	172.7
92.5°	135.8	143.7	151.6	156.6	158.6	160.7	162.6	164.6
95°	127.9	135.5	143.2	148.2	150.5	152.9	155.3	157.6
97.5°	122.3	128.8	135.3	139.7	142.0	144.3	146.5	148.8
100°	125.2	128.8	132.4	135.1	137.0	138.9	140.8	142.6
102.5°	194.8	169.0	143.1	131.1	133.1	135.0	137.0	138.9
105°	334.4	342.0	349.7	351.3	347.0	342.5	338.2	333.8
107.5°	387.1	393.9	400.6	405.2	407.6	410.0	412.5	414.9
110°	423.1	429.0	435.0	439.2	441.6	444.2	446.6	449.1



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CATALOG NUMBER: S124DIP-S1020D1035U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	457.3	462.6	468.0	472.0	474.6	477.2	479.8	482.4
115°	508.9	514.6	520.3	524.0	525.7	527.4	529.1	530.8
117.5°	560.4	565.4	570.4	573.8	575.7	577.6	579.4	581.3
120°	591.8	597.1	602.3	605.7	607.3	609.0	610.5	612.1
122.5°	623.3	628.4	633.4	636.7	638.1	639.4	640.9	642.3
125°	667.3	672.5	677.6	681.0	682.6	684.3	685.9	687.5
127.5°	709.9	714.2	718.4	721.4	722.9	724.4	725.9	727.4
130°	735.8	740.4	744.9	747.9	749.4	750.8	752.3	753.8
132.5°	761.7	766.0	770.4	773.2	774.5	775.9	777.2	778.5
135°	795.7	799.9	804.2	807.2	809.1	810.9	812.7	814.5
137.5°	829.3	833.2	837.2	839.7	840.8	841.9	843.0	844.1
140°	850.2	853.9	857.6	860.2	861.5	862.9	864.3	865.7
142.5°	870.1	873.3	876.5	878.6	879.6	880.7	881.8	882.8
145°	899.3	900.9	902.5	904.0	905.3	906.7	908.0	909.3
147.5°	925.0	925.3	925.7	926.3	927.2	928.2	929.2	930.1
150°	942.6	942.6	942.6	942.7	942.9	943.1	943.3	943.4
152.5°	958.4	958.7	958.9	959.0	958.9	958.9	958.7	958.6
155°	979.6	980.3	981.0	981.1	980.6	980.1	979.5	979.1
157.5°	997.9	998.9	999.7	999.7	998.9	997.9	997.0	996.1
160°	1009.6	1010.7	1011.7	1011.7	1010.7	1009.6	1008.5	1007.5
162.5°	1019.1	1020.2	1021.2	1021.1	1019.9	1018.7	1017.6	1016.4
165°	1032.5	1033.9	1035.2	1035.1	1033.6	1032.0	1030.4	1028.8
167.5°	1042.2	1043.8	1045.3	1045.2	1043.5	1041.7	1039.9	1038.2
170°	1048.3	1049.6	1051.1	1050.9	1049.2	1047.4	1045.6	1043.9
172.5°	1052.1	1053.4	1054.9	1054.6	1052.7	1050.8	1048.9	1047.0
175°	1056.5	1058.1	1059.7	1059.4	1057.3	1055.2	1053.1	1051.0
177.5°	1058.3	1059.4	1060.6	1060.3	1058.6	1056.9	1055.2	1053.5
180°	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3

(END OF REPORT)