

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: P332556

Luminaire Tested: **S124DIP-S575D810U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332556  
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-S575D810U835-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5605.5 lumens  
Efficiency: N/A  
Efficacy: 146.0 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

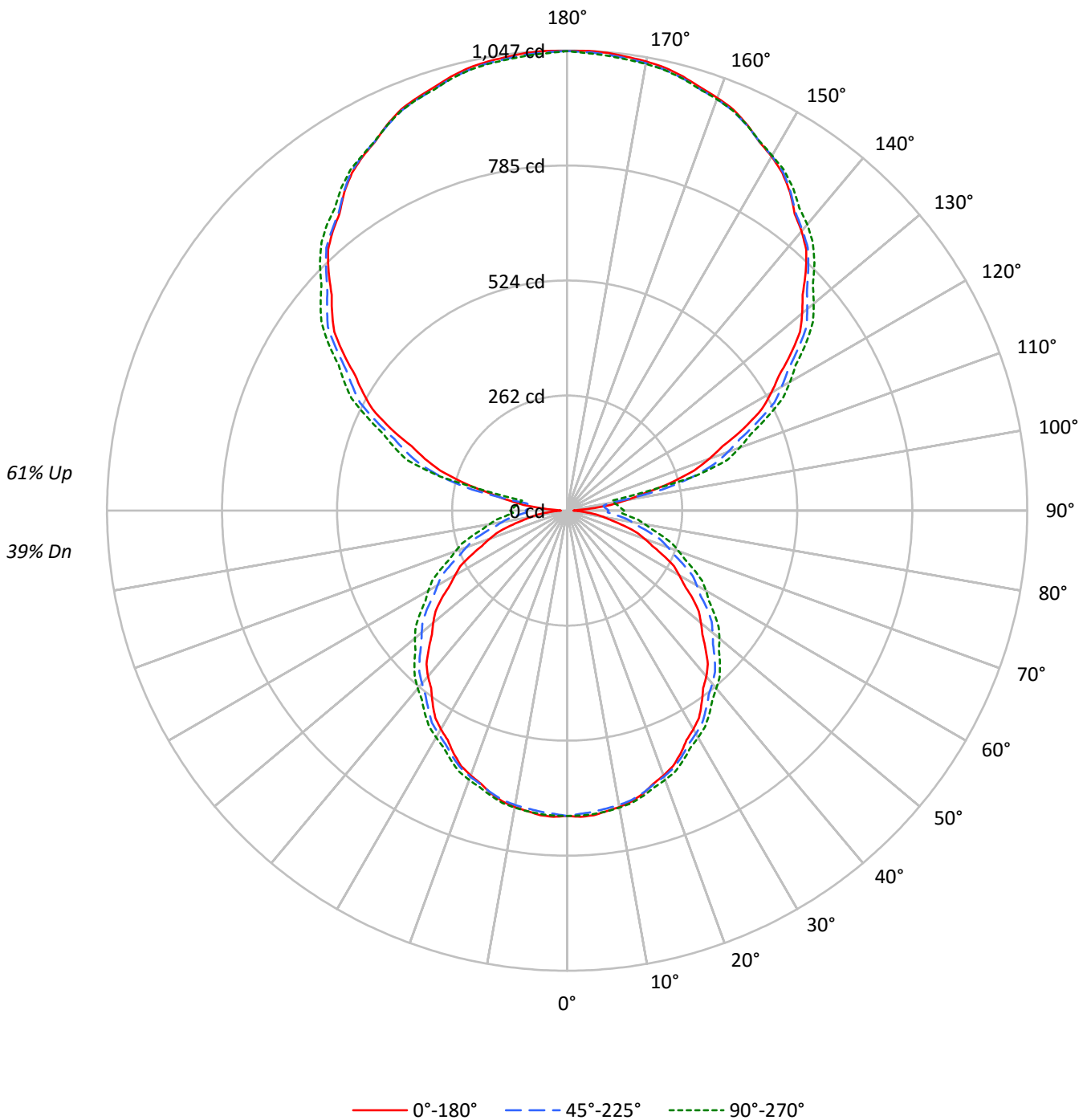
Input Watts (W): 38.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	95	90	86	82	86	82	78	75	66	64	62	52	51	49	39	38	37	31
2	86	78	72	66	78	71	66	61	58	54	50	46	43	40	34	32	31	26
3	78	68	61	55	70	62	56	50	51	46	42	40	37	34	30	28	26	21
4	71	60	52	46	64	55	48	42	45	40	35	35	32	29	27	24	22	18
5	65	53	45	39	59	49	42	36	40	34	30	32	28	25	24	21	19	15
6	60	48	40	34	54	44	36	31	36	30	26	28	24	21	22	19	17	13
7	55	43	35	29	50	39	32	27	32	27	23	26	22	19	20	17	15	12
8	51	39	31	26	46	36	29	24	29	24	20	24	20	17	18	15	13	11
9	48	35	28	23	43	32	26	21	27	22	18	22	18	15	17	14	12	9
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	15	13	11	9

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5610	5610	5610
5°	5628	5483	5498
10°	5593	5393	5388
15°	5543	5289	5260
20°	5467	5175	5135
25°	5382	5046	4997
30°	5290	4919	4856
35°	5185	4787	4732
40°	5102	4663	4603
45°	4978	4549	4492
50°	4873	4416	4375
55°	4765	4291	4237
60°	4596	4132	4112
65°	4410	3962	3958
70°	4186	3768	3778
75°	3872	3553	3616
80°	3526	3347	3457
85°	3082	3163	3364



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.8	1.2
10°-20°	188.5	3.4
20°-30°	285.1	5.1
30°-40°	344.9	6.2
40°-50°	364.7	6.5
50°-60°	343.2	6.1
60°-70°	284.7	5.1
70°-80°	200.0	3.6
80°-90°	116.1	2.1
90°-100°	102.9	1.8
100°-110°	277.7	5.0
110°-120°	469.5	8.4
120°-130°	572.4	10.2
130°-140°	600.4	10.7
140°-150°	555.5	9.9
150°-160°	446.7	8.0
160°-170°	288.1	5.1
170°-180°	99.3	1.8
0°-30°	539.4	9.6
0°-40°	884.4	15.8
0°-60°	1592.2	28.4
0°-90°	2193.0	39.1
90°-120°	850.0	15.2
90°-150°	2578.4	46.0
90°-180°	3413.0	60.9
0°-180°	5605.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	695	695	695	695	695	
5°	696	693	688	694	693	66
15°	667	668	665	672	672	188
25°	610	615	617	625	626	281
35°	534	543	551	561	564	334
45°	445	460	475	487	492	344
55°	349	365	388	403	408	311
65°	241	266	293	311	318	239
75°	134	163	195	216	224	142
85°	41	74	109	131	140	44
90°	15	54	94	120	129	10
95°	53	54	85	110	118	63
105°	242	263	295	319	300	254
115°	444	454	478	496	502	437
125°	621	624	641	658	664	554
135°	768	768	776	789	796	592
145°	884	886	886	891	896	552
155°	969	969	967	970	968	447
165°	1022	1018	1018	1024	1017	289
175°	1045	1041	1042	1048	1039	100
180°	1045	1045	1045	1045	1045	



TEST NUMBER: P332556

CATALOG NUMBER: S124DIP-S575D810U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	697.4	697.0	696.6	696.1	695.7	695.0	693.9	692.8	691.6	690.5	691.5
5°	695.7	695.2	694.6	694.1	693.6	692.7	691.5	690.3	689.1	687.9	689.3
7.5°	689.8	689.4	689.1	688.8	688.5	687.9	686.9	685.9	684.8	683.8	685.4
10°	684.8	684.6	684.4	684.3	684.1	683.6	682.7	681.8	681.0	680.1	681.7
12.5°	677.9	677.9	677.9	677.8	677.8	677.5	676.9	676.3	675.7	675.1	676.5
15°	666.9	667.1	667.2	667.4	667.6	667.4	666.9	666.4	665.8	665.3	666.9
17.5°	651.8	652.3	652.8	653.3	653.9	654.1	654.0	653.9	653.8	653.7	655.2
20°	641.2	641.7	642.2	642.8	643.3	643.6	643.8	644.0	644.1	644.3	646.0
22.5°	629.4	630.0	630.7	631.3	632.0	632.5	632.8	633.1	633.4	633.7	635.5
25°	610.1	611.1	612.2	613.2	614.2	615.0	615.5	616.0	616.6	617.1	619.0
27.5°	588.6	590.1	591.6	593.2	594.7	595.8	596.6	597.4	598.2	599.0	600.8
30°	574.3	575.7	577.0	578.4	579.8	581.1	582.3	583.5	584.7	586.0	587.9
32.5°	558.7	560.4	562.0	563.7	565.4	566.9	568.2	569.6	570.9	572.3	574.4
35°	533.8	535.9	538.0	540.0	542.1	544.0	545.7	547.5	549.2	550.9	553.4
37.5°	508.8	511.1	513.5	515.9	518.3	520.6	522.7	524.9	527.0	529.1	531.6
40°	492.6	494.8	497.1	499.3	501.6	503.9	506.3	508.7	511.2	513.6	516.2
42.5°	473.9	476.4	478.9	481.5	484.0	486.7	489.5	492.3	495.2	498.0	500.9
45°	445.1	448.4	451.7	455.0	458.2	461.5	464.8	468.1	471.4	474.7	477.6
47.5°	417.6	420.9	424.3	427.7	431.1	434.7	438.5	442.3	446.1	449.9	453.0
50°	397.6	401.4	405.2	409.1	412.9	416.7	420.5	424.3	428.1	431.9	435.3
52.5°	377.7	381.5	385.3	389.1	392.9	397.0	401.4	405.7	410.1	414.4	417.9
55°	348.6	352.2	355.9	359.5	363.1	367.5	372.7	377.9	383.1	388.3	391.8
57.5°	316.1	320.6	325.1	329.6	334.1	338.9	344.0	349.2	354.4	359.5	363.6
60°	294.9	299.4	303.9	308.4	312.9	318.0	323.7	329.4	335.1	340.8	344.8
62.5°	274.4	279.3	284.2	289.1	294.0	299.3	305.0	310.7	316.5	322.2	326.1
65°	241.2	246.8	252.3	257.8	263.4	269.1	274.9	280.8	286.7	292.6	296.9
67.5°	209.3	215.2	221.1	227.0	232.8	238.9	245.2	251.5	257.8	264.1	268.5
70°	187.5	193.4	199.3	205.2	211.1	217.3	223.8	230.4	237.0	243.6	248.2
72.5°	166.4	172.4	178.4	184.4	190.4	196.9	203.9	210.9	217.9	224.9	229.4
75°	133.8	140.2	146.6	153.0	159.4	166.3	173.5	180.8	188.1	195.3	200.2
77.5°	103.5	110.3	117.1	123.8	130.6	137.8	145.4	153.0	160.6	168.2	173.1
80°	84.8	91.7	98.7	105.6	112.5	119.7	127.4	135.0	142.6	150.2	155.4
82.5°	66.1	73.3	80.5	87.7	94.9	102.3	109.9	117.5	125.1	132.8	138.1
85°	41.2	48.5	55.8	63.0	70.3	77.8	85.6	93.4	101.2	108.9	114.1
87.5°	23.5	30.9	38.4	45.8	53.3	60.9	68.7	76.6	84.5	92.3	97.5
90°	14.8	23.6	32.5	41.3	50.1	58.9	67.8	76.6	85.4	94.2	100.3
92.5°	21.7	28.0	34.3	40.7	47.0	54.6	63.4	72.2	81.1	89.9	95.8
95°	53.1	52.9	52.7	52.5	52.3	55.8	63.1	70.4	77.6	84.9	90.6
97.5°	100.5	109.1	117.7	126.3	134.9	133.0	120.6	108.3	95.9	83.5	88.2
100°	136.8	144.4	152.0	159.7	167.3	162.5	145.2	128.0	110.8	93.5	95.3
102.5°	178.1	184.3	190.5	196.8	203.0	207.9	211.4	214.8	218.3	221.8	194.5
105°	242.4	246.9	251.4	255.9	260.4	266.2	273.5	280.8	288.0	295.3	301.2
107.5°	303.3	306.7	310.1	313.4	316.8	322.1	329.3	336.5	343.8	351.0	356.0
110°	344.0	346.9	349.9	352.8	355.8	360.8	367.9	375.0	382.1	389.2	393.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	383.4	386.5	389.6	392.7	395.7	400.4	406.7	412.9	419.2	425.5	429.2
115°	444.1	446.2	448.2	450.3	452.4	456.1	461.5	466.8	472.2	477.6	481.7
117.5°	499.5	501.1	502.7	504.3	506.0	509.5	515.1	520.6	526.2	531.7	535.2
120°	536.4	537.6	538.8	540.0	541.2	544.2	549.1	553.9	558.8	563.6	567.4
122.5°	571.4	571.9	572.4	572.9	573.5	576.2	581.2	586.2	591.2	596.1	599.8
125°	620.8	621.3	621.9	622.4	622.9	625.1	629.1	633.1	637.1	641.0	644.9
127.5°	668.2	668.2	668.2	668.2	668.2	670.3	674.4	678.5	682.6	686.7	689.7
130°	698.2	698.2	698.2	698.2	698.2	699.9	703.2	706.4	709.7	713.0	716.3
132.5°	726.4	726.5	726.6	726.8	726.9	728.4	731.3	734.2	737.1	739.9	743.1
135°	767.8	767.6	767.5	767.3	767.1	768.0	769.9	771.8	773.7	775.6	778.7
137.5°	805.2	805.1	805.0	804.9	804.8	805.4	806.7	808.1	809.5	810.8	813.7
140°	829.6	829.8	829.9	830.1	830.3	830.6	831.1	831.7	832.2	832.7	835.5
142.5°	850.8	851.4	852.0	852.6	853.2	853.6	853.7	853.8	853.9	854.0	856.3
145°	884.3	884.7	885.0	885.4	885.7	885.9	885.9	885.9	885.9	885.9	887.1
147.5°	911.1	911.9	912.7	913.5	914.3	914.6	914.4	914.2	914.0	913.9	914.2
150°	930.4	931.0	931.5	932.0	932.5	932.7	932.5	932.4	932.2	932.0	932.0
152.5°	946.1	946.6	947.1	947.7	948.2	948.3	948.0	947.7	947.3	947.0	947.3
155°	968.8	968.9	969.1	969.3	969.5	969.3	968.8	968.2	967.7	967.2	967.9
157.5°	988.0	987.9	987.8	987.7	987.6	987.2	986.6	986.1	985.5	984.9	985.8
160°	999.3	998.7	998.2	997.7	997.2	996.8	996.7	996.5	996.3	996.1	997.2
162.5°	1009.3	1008.6	1007.9	1007.3	1006.6	1006.2	1006.0	1005.9	1005.7	1005.5	1006.6
165°	1021.9	1021.1	1020.2	1019.3	1018.5	1018.0	1018.0	1018.0	1018.0	1018.0	1019.4
167.5°	1031.9	1031.0	1030.1	1029.2	1028.3	1027.8	1027.7	1027.6	1027.5	1027.4	1028.9
170°	1037.6	1036.5	1035.5	1034.4	1033.4	1033.0	1033.1	1033.3	1033.5	1033.7	1035.0
172.5°	1041.3	1040.3	1039.2	1038.2	1037.2	1036.7	1036.9	1037.1	1037.2	1037.4	1038.8
175°	1045.4	1044.3	1043.3	1042.3	1041.2	1040.8	1041.0	1041.1	1041.3	1041.5	1043.0
177.5°	1047.3	1046.3	1045.3	1044.3	1043.4	1043.0	1043.3	1043.6	1043.9	1044.1	1045.2
180°	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	692.5	693.4	694.4	694.8	694.7	694.5	694.4	694.3
5°	690.7	692.0	693.4	694.0	693.9	693.7	693.5	693.3
7.5°	687.0	688.5	690.1	690.8	690.6	690.4	690.2	690.1
10°	683.2	684.8	686.3	687.0	686.9	686.7	686.5	686.3
12.5°	678.0	679.4	680.8	681.5	681.5	681.4	681.4	681.4
15°	668.4	670.0	671.5	672.2	672.1	671.9	671.7	671.5
17.5°	656.8	658.4	660.0	660.7	660.6	660.5	660.3	660.2
20°	647.8	649.5	651.2	652.1	652.1	652.1	652.1	652.1
22.5°	637.2	638.9	640.6	641.7	641.9	642.2	642.5	642.8
25°	620.9	622.8	624.7	625.7	625.9	626.1	626.2	626.4
27.5°	602.6	604.3	606.1	607.1	607.3	607.5	607.7	607.9
30°	589.8	591.7	593.6	594.7	595.0	595.4	595.7	596.1
32.5°	576.6	578.8	581.0	582.2	582.6	582.9	583.3	583.6
35°	555.8	558.2	560.6	562.1	562.6	563.1	563.6	564.2
37.5°	534.1	536.5	539.0	540.5	541.0	541.6	542.1	542.7
40°	518.8	521.4	524.0	525.6	526.3	527.0	527.7	528.4
42.5°	503.8	506.6	509.5	511.2	511.8	512.3	512.9	513.4
45°	480.6	483.5	486.4	488.3	489.2	490.1	490.9	491.8
47.5°	456.0	459.1	462.1	464.1	465.2	466.2	467.3	468.3
50°	438.8	442.3	445.7	448.0	449.0	450.0	451.1	452.1
52.5°	421.4	424.8	428.3	430.5	431.6	432.6	433.6	434.7
55°	395.2	398.7	402.1	404.4	405.4	406.5	407.5	408.5
57.5°	367.7	371.9	376.0	378.5	379.5	380.4	381.4	382.4
60°	348.8	352.8	356.7	359.4	360.8	362.2	363.6	365.0
62.5°	330.1	334.1	338.1	340.7	342.1	343.5	344.9	346.3
65°	301.2	305.6	309.9	312.7	314.1	315.5	316.9	318.3
67.5°	272.9	277.3	281.7	284.5	285.9	287.2	288.6	289.9
70°	252.9	257.6	262.2	265.2	266.4	267.6	268.8	270.0
72.5°	233.9	238.5	243.0	245.9	247.3	248.6	250.0	251.3
75°	205.0	209.8	214.7	217.9	219.4	221.0	222.6	224.1
77.5°	178.1	183.0	187.9	191.2	192.8	194.5	196.1	197.8
80°	160.6	165.7	170.9	174.2	175.6	177.0	178.4	179.8
82.5°	143.4	148.7	154.1	157.5	159.0	160.5	162.0	163.6
85°	119.3	124.5	129.7	133.2	134.9	136.6	138.3	140.1
87.5°	102.8	108.0	113.2	116.6	118.2	119.8	121.4	123.0
90°	106.4	112.4	118.5	122.4	124.1	125.8	127.6	129.3
92.5°	101.7	107.6	113.6	117.2	118.7	120.1	121.6	123.1
95°	96.3	102.0	107.7	111.5	113.2	114.9	116.7	118.4
97.5°	92.8	97.4	102.1	105.2	106.9	108.5	110.2	111.8
100°	97.0	98.7	100.4	102.0	103.3	104.7	106.1	107.5
102.5°	167.1	139.8	112.4	99.5	100.9	102.2	103.6	105.0
105°	307.1	313.0	318.9	319.4	314.5	309.6	304.7	299.9
107.5°	361.0	366.1	371.1	374.5	376.4	378.3	380.3	382.2
110°	397.8	402.1	406.5	409.6	411.5	413.4	415.3	417.2





TEST NUMBER: P332556

CATALOG NUMBER: S124DIP-S575D810U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	433.0	436.8	440.5	443.4	445.5	447.5	449.6	451.6
115°	485.9	490.0	494.2	496.8	498.1	499.3	500.5	501.7
117.5°	538.7	542.3	545.8	548.2	549.5	550.8	552.2	553.5
120°	571.2	575.0	578.8	581.3	582.3	583.3	584.4	585.4
122.5°	603.5	607.1	610.8	613.1	614.0	614.9	615.8	616.7
125°	648.7	652.5	656.3	658.8	660.0	661.2	662.4	663.6
127.5°	692.7	695.8	698.8	700.8	701.8	702.9	703.9	704.9
130°	719.6	722.9	726.2	728.3	729.4	730.4	731.4	732.5
132.5°	746.2	749.4	752.5	754.5	755.4	756.3	757.2	758.1
135°	781.8	784.9	788.1	790.3	791.7	793.1	794.5	795.8
137.5°	816.6	819.5	822.4	824.3	825.0	825.8	826.5	827.3
140°	838.2	841.0	843.8	845.7	846.7	847.8	848.8	849.8
142.5°	858.7	861.0	863.4	865.0	865.7	866.5	867.2	868.0
145°	888.3	889.5	890.7	891.9	892.9	893.9	895.0	896.0
147.5°	914.4	914.7	915.0	915.5	916.2	916.9	917.7	918.4
150°	932.0	932.0	932.0	932.1	932.3	932.4	932.6	932.8
152.5°	947.6	947.9	948.1	948.2	948.1	948.0	947.9	947.8
155°	968.6	969.3	970.0	970.1	969.5	969.0	968.5	968.0
157.5°	986.7	987.6	988.5	988.5	987.6	986.7	985.8	984.9
160°	998.2	999.3	1000.3	1000.3	999.3	998.2	997.2	996.1
162.5°	1007.6	1008.6	1009.7	1009.6	1008.4	1007.2	1006.1	1004.9
165°	1020.8	1022.2	1023.6	1023.5	1021.9	1020.4	1018.8	1017.2
167.5°	1030.5	1032.0	1033.5	1033.4	1031.7	1029.9	1028.2	1026.5
170°	1036.4	1037.8	1039.2	1039.0	1037.3	1035.6	1033.8	1032.1
172.5°	1040.2	1041.6	1043.0	1042.7	1040.9	1039.0	1037.1	1035.2
175°	1044.6	1046.2	1047.7	1047.5	1045.4	1043.3	1041.2	1039.1
177.5°	1046.4	1047.5	1048.6	1048.3	1046.6	1045.0	1043.3	1041.6
180°	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4

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