

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: P333218-940

Luminaire Tested: **S125DIP-S850D590U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333218-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-11,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIP-S850D590U940-4F0-1E-UDD-D1  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4751.3 lumens  
Efficiency: N/A  
Efficacy: 117.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

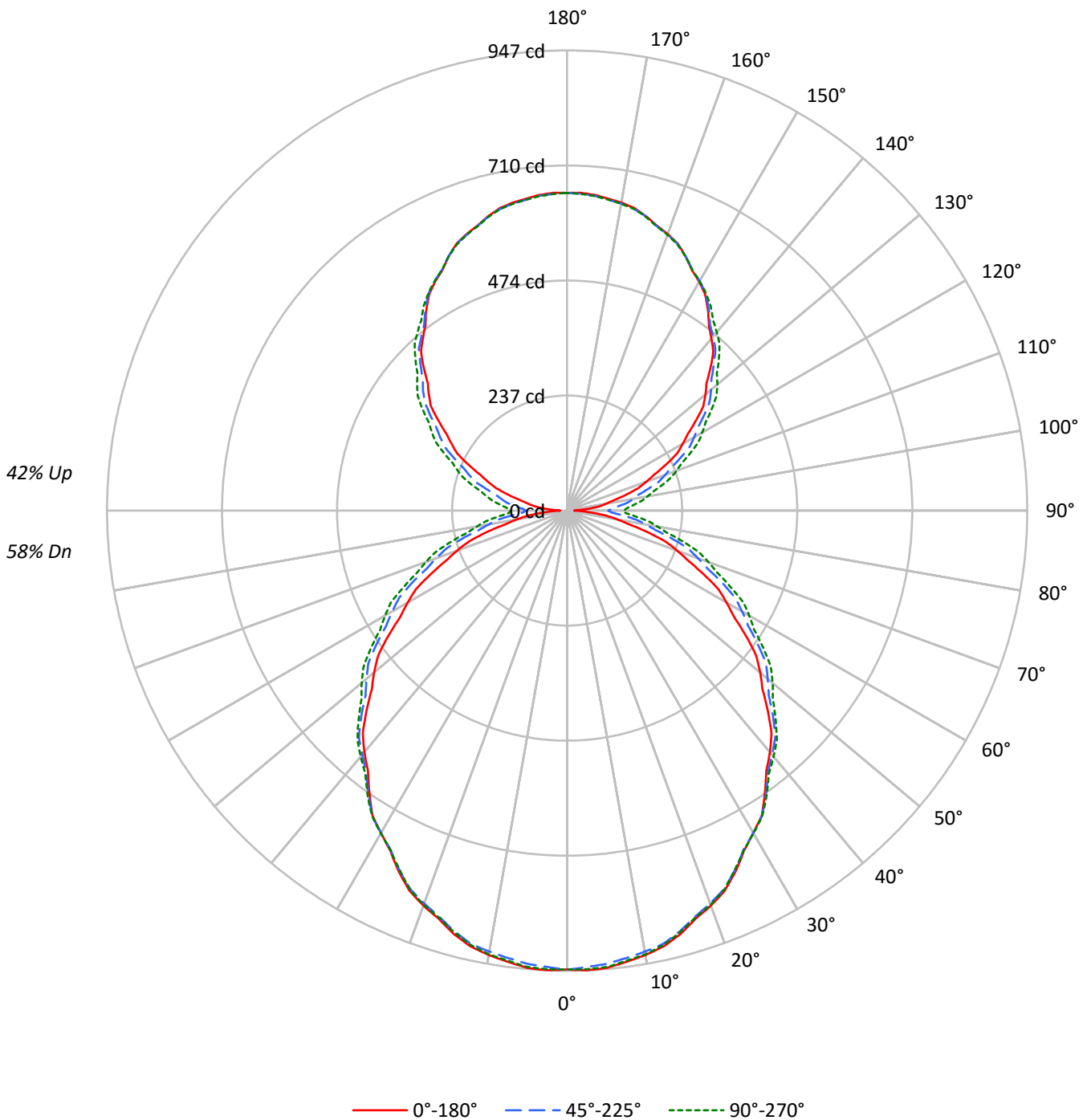
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63	58
1	99	94	90	86	92	88	84	80	76	73	70	65	63	61	55	53	52	47
2	90	82	75	69	83	76	70	65	66	61	58	56	53	50	48	45	43	39
3	81	71	64	57	75	67	60	54	58	52	48	50	45	42	42	39	36	32
4	74	63	55	48	69	59	52	46	51	45	41	44	39	36	37	34	31	28
5	68	56	48	41	63	53	45	39	46	40	35	39	35	31	34	30	27	24
6	63	50	42	36	58	47	40	34	41	35	30	36	31	27	30	27	24	21
7	58	45	37	31	54	43	35	30	37	31	27	32	27	24	28	24	21	18
8	54	41	33	28	50	39	31	26	34	28	24	30	25	21	25	22	19	16
9	50	38	30	25	47	35	28	24	31	25	21	27	22	19	23	20	17	15
10	47	35	27	22	44	33	26	21	29	23	19	25	20	17	22	18	15	13

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

	0°	45°	90°
0°	6101	6101	6101
5°	6113	5988	6007
10°	6069	5881	5872
15°	5998	5753	5701
20°	5900	5595	5529
25°	5784	5425	5318
30°	5644	5239	5126
35°	5513	5068	4951
40°	5379	4888	4773
45°	5228	4733	4617
50°	5084	4566	4479
55°	4912	4408	4315
60°	4722	4227	4149
65°	4525	4039	3961
70°	4301	3780	3769
75°	3945	3533	3533
80°	3483	3233	3276
85°	3046	3031	3195



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.3	1.9
10°-20°	253.6	5.3
20°-30°	377.1	7.9
30°-40°	446.7	9.4
40°-50°	461.8	9.7
50°-60°	425.4	9.0
60°-70°	343.9	7.2
70°-80°	230.3	4.8
80°-90°	120.9	2.5
90°-100°	110.8	2.3
100°-110°	178.7	3.8
110°-120°	252.1	5.3
120°-130°	307.0	6.5
130°-140°	331.1	7.0
140°-150°	318.2	6.7
150°-160°	265.8	5.6
160°-170°	176.7	3.7
170°-180°	61.8	1.3
0°-30°	720.0	15.2
0°-40°	1166.7	24.6
0°-60°	2053.9	43.2
0°-90°	2749.0	57.9
90°-120°	541.6	11.4
90°-150°	1497.9	31.5
90°-180°	2002.0	42.1
0°-180°	4751.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	945	945	945	945	945	
5°	945	942	936	943	943	90
15°	902	903	896	902	898	254
25°	820	822	817	820	816	377
35°	709	715	713	716	716	444
45°	584	594	599	605	607	451
55°	449	464	479	489	493	401
65°	309	331	353	366	370	307
75°	170	195	224	242	247	181
85°	51	82	114	134	142	54
90°	15	49	84	107	116	12
95°	45	71	107	130	138	45
105°	124	142	172	193	202	133
115°	225	234	258	274	280	222
125°	324	327	345	358	363	290
135°	418	420	427	439	442	322
145°	505	506	508	512	514	315
155°	577	577	577	579	577	266
165°	627	626	627	628	626	177
175°	652	650	650	653	650	62
180°	654	654	654	654	654	



TEST NUMBER: P333218-940

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6
2.5°	946.8	946.6	946.2	945.8	945.5	944.8	943.6	942.4	941.3	940.1	941.3
5°	944.6	944.2	943.8	943.3	943.0	942.0	940.6	939.1	937.7	936.3	937.9
7.5°	936.3	936.1	935.9	935.8	935.6	934.8	933.4	931.8	930.3	928.9	930.3
10°	928.9	928.9	928.9	928.9	928.9	928.1	926.4	924.8	923.1	921.5	922.9
12.5°	918.5	918.6	918.8	919.0	919.2	918.6	917.3	916.0	914.6	913.3	914.4
15°	902.1	902.2	902.4	902.6	902.9	902.2	900.8	899.4	897.9	896.4	897.7
17.5°	880.6	880.9	881.4	881.7	882.2	881.6	880.2	878.8	877.4	875.9	876.8
20°	865.0	865.4	865.8	866.2	866.7	866.1	864.7	863.3	861.7	860.3	860.9
22.5°	847.2	847.9	848.6	849.4	850.2	849.7	848.1	846.5	844.9	843.3	844.1
25°	819.6	820.2	820.8	821.4	822.1	821.7	820.6	819.3	818.1	816.8	817.6
27.5°	788.8	789.8	790.7	791.6	792.5	792.2	790.9	789.4	788.0	786.7	787.2
30°	765.9	767.1	768.4	769.5	770.8	770.8	769.5	768.4	767.1	765.9	766.3
32.5°	745.1	746.2	747.3	748.3	749.4	749.5	748.6	747.7	746.8	745.9	746.3
35°	709.4	710.9	712.3	713.7	715.2	715.6	715.0	714.3	713.7	713.1	713.7
37.5°	673.6	674.9	676.3	677.6	678.9	679.5	679.2	679.0	678.9	678.7	679.5
40°	649.2	650.9	652.5	654.2	655.8	656.5	656.3	656.1	655.9	655.7	656.5
42.5°	622.5	624.6	626.8	628.9	631.1	632.4	632.8	633.3	633.7	634.2	635.2
45°	584.3	586.7	588.9	591.1	593.4	595.0	596.1	597.1	598.2	599.1	600.7
47.5°	545.3	547.4	549.5	551.6	553.7	555.6	557.4	559.2	560.9	562.7	564.8
50°	518.6	520.8	523.2	525.4	527.6	529.9	532.2	534.5	536.7	539.0	541.3
52.5°	490.4	493.2	496.0	498.7	501.5	504.3	507.0	509.8	512.6	515.3	517.7
55°	449.2	452.5	455.8	459.1	462.4	465.7	469.0	472.3	475.5	478.8	481.1
57.5°	406.9	410.9	414.8	418.7	422.8	426.6	430.4	434.2	437.9	441.8	444.3
60°	378.8	382.9	387.0	391.1	395.2	399.4	403.5	407.6	411.7	415.8	418.9
62.5°	351.3	355.4	359.6	363.7	367.8	372.1	376.6	381.0	385.4	389.9	393.3
65°	309.3	314.1	318.8	323.5	328.2	333.1	338.0	343.0	347.9	352.8	356.0
67.5°	269.7	274.3	278.8	283.4	287.9	292.7	297.7	302.8	307.8	312.8	316.6
70°	240.8	245.5	250.2	255.0	259.8	264.7	270.1	275.4	280.8	286.1	290.1
72.5°	212.7	217.5	222.4	227.3	232.2	237.6	243.4	249.3	255.1	261.0	265.2
75°	170.4	175.8	181.1	186.5	191.8	197.8	204.4	211.0	217.5	224.1	228.2
77.5°	129.8	136.0	142.2	148.4	154.5	160.8	167.1	173.4	179.8	186.2	190.6
80°	104.7	110.8	117.0	123.1	129.4	135.9	142.9	149.9	156.9	163.9	168.4
82.5°	81.7	88.2	94.7	101.2	107.7	114.5	121.7	128.9	136.0	143.2	147.6
85°	50.9	57.7	64.6	71.3	78.1	85.1	92.3	99.5	106.7	113.9	118.4
87.5°	29.0	35.8	42.5	49.3	56.1	63.0	70.2	77.3	84.4	91.7	96.5
90°	15.3	22.8	30.3	37.8	45.3	53.0	60.7	68.5	76.3	84.1	89.3
92.5°	25.7	32.4	39.1	45.8	52.5	60.0	68.1	76.2	84.4	92.5	97.8
95°	45.1	50.6	56.3	61.8	67.4	74.3	82.4	90.5	98.6	106.7	112.1
97.5°	65.9	70.8	75.7	80.6	85.5	92.1	100.4	108.7	117.0	125.4	130.4
100°	81.4	85.7	90.1	94.3	98.7	104.9	113.0	121.0	129.0	137.1	142.4
102.5°	98.2	102.6	107.1	111.5	115.9	121.7	128.9	136.1	143.2	150.4	155.7
105°	124.3	128.1	132.1	135.9	139.7	145.1	151.9	158.8	165.7	172.5	177.3
107.5°	153.3	156.7	160.1	163.5	166.7	171.7	178.2	184.6	191.0	197.5	201.9
110°	173.3	176.4	179.4	182.4	185.5	190.0	196.2	202.2	208.3	214.5	218.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	194.5	196.8	199.0	201.3	203.6	207.7	213.7	219.8	225.8	231.8	235.8
115°	224.8	226.7	228.6	230.5	232.4	236.1	241.7	247.3	252.8	258.4	262.0
117.5°	255.2	256.4	257.5	258.7	259.8	263.1	268.3	273.6	278.8	284.1	287.7
120°	274.7	275.9	277.1	278.3	279.5	282.5	287.3	292.2	297.0	301.8	305.4
122.5°	295.2	295.7	296.1	296.7	297.1	299.8	304.7	309.5	314.4	319.2	322.5
125°	323.7	324.1	324.6	325.1	325.6	327.9	332.2	336.4	340.6	344.8	347.9
127.5°	353.3	353.5	353.7	353.8	354.0	355.8	359.4	362.8	366.4	369.9	372.8
130°	371.6	371.9	372.3	372.6	373.0	374.8	377.8	380.9	384.1	387.2	389.9
132.5°	389.1	390.0	390.9	391.8	392.7	394.2	396.4	398.6	400.7	403.0	405.7
135°	417.9	418.5	418.9	419.4	419.8	420.9	422.4	424.0	425.5	427.0	429.7
137.5°	445.1	445.5	446.0	446.5	447.0	447.7	448.7	449.6	450.6	451.6	454.1
140°	461.8	462.4	463.0	463.5	464.0	464.6	465.2	465.7	466.3	466.8	469.3
142.5°	479.3	479.7	479.9	480.3	480.5	480.9	481.4	481.9	482.3	482.9	484.9
145°	505.1	505.3	505.5	505.8	506.0	506.3	506.7	507.0	507.4	507.7	508.7
147.5°	527.9	528.2	528.4	528.7	529.0	529.1	529.4	529.8	530.0	530.3	530.8
150°	543.8	543.7	543.6	543.5	543.3	543.5	543.9	544.4	544.8	545.3	545.3
152.5°	556.8	557.0	557.1	557.3	557.4	557.6	557.8	557.9	558.1	558.4	558.7
155°	576.8	576.8	576.8	576.8	576.8	576.9	577.0	577.1	577.3	577.4	577.8
157.5°	594.8	594.5	594.2	594.1	593.8	593.7	593.8	594.0	594.1	594.1	594.6
160°	605.4	605.0	604.7	604.3	604.0	603.9	604.0	604.1	604.2	604.3	604.8
162.5°	614.7	614.5	614.2	613.9	613.7	613.6	613.6	613.7	613.7	613.7	614.2
165°	627.2	627.0	626.8	626.5	626.3	626.2	626.3	626.5	626.6	626.7	627.1
167.5°	637.8	637.4	636.9	636.4	636.0	635.8	635.8	635.8	635.8	635.8	636.4
170°	643.5	643.0	642.6	642.1	641.7	641.5	641.5	641.5	641.5	641.5	642.1
172.5°	647.6	647.1	646.7	646.2	645.8	645.5	645.5	645.5	645.5	645.5	646.2
175°	652.1	651.7	651.2	650.8	650.3	650.1	650.1	650.1	650.1	650.1	650.8
177.5°	654.5	654.2	653.8	653.4	653.0	652.8	652.7	652.6	652.6	652.5	653.0
180°	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6
2.5°	942.4	943.6	944.8	945.3	945.1	944.9	944.8	944.6
5°	939.6	941.2	942.9	943.6	943.3	943.2	943.0	942.8
7.5°	931.7	933.2	934.6	935.2	935.0	934.9	934.6	934.4
10°	924.3	925.8	927.2	927.8	927.6	927.5	927.2	927.0
12.5°	915.5	916.7	917.7	918.0	917.5	916.9	916.4	915.9
15°	898.9	900.2	901.4	901.6	900.8	899.9	899.1	898.3
17.5°	877.8	878.8	879.7	879.9	879.4	879.0	878.4	878.0
20°	861.6	862.2	862.8	863.1	863.1	863.1	863.1	863.1
22.5°	844.9	845.6	846.4	846.6	846.1	845.6	845.1	844.6
25°	818.5	819.3	820.1	820.0	818.9	818.0	816.9	815.9
27.5°	787.7	788.4	788.9	789.1	788.6	788.3	787.9	787.6
30°	766.7	767.1	767.5	767.7	767.4	767.2	767.0	766.8
32.5°	746.7	747.1	747.5	747.6	747.4	747.3	747.0	746.8
35°	714.3	715.0	715.6	715.9	715.9	715.9	715.9	715.9
37.5°	680.3	681.1	681.9	682.3	682.2	682.2	682.1	682.0
40°	657.3	658.2	659.0	659.6	660.0	660.4	660.8	661.2
42.5°	636.1	637.1	638.1	638.6	638.7	638.8	638.9	639.0
45°	602.1	603.5	604.9	605.7	606.0	606.2	606.4	606.6
47.5°	566.9	569.0	571.1	572.4	572.8	573.3	573.7	574.2
50°	543.5	545.8	548.0	549.5	550.1	550.7	551.3	552.0
52.5°	520.1	522.5	525.0	526.5	526.9	527.4	527.8	528.2
55°	483.3	485.6	487.9	489.4	490.2	491.1	491.9	492.7
57.5°	446.9	449.5	452.1	453.7	454.3	455.0	455.6	456.2
60°	422.0	425.1	428.2	430.0	430.6	431.2	431.9	432.5
62.5°	396.7	400.1	403.6	405.6	406.4	407.2	408.0	408.8
65°	359.0	362.1	365.2	367.1	368.0	368.8	369.6	370.4
67.5°	320.3	324.0	327.8	330.2	331.3	332.3	333.4	334.5
70°	294.0	297.9	301.8	304.3	305.6	306.8	308.1	309.3
72.5°	269.5	273.7	277.9	280.5	281.4	282.3	283.2	284.1
75°	232.4	236.5	240.6	243.2	244.2	245.2	246.2	247.3
77.5°	195.2	199.7	204.3	207.0	207.8	208.6	209.4	210.3
80°	173.0	177.5	182.0	184.7	185.6	186.4	187.2	188.0
82.5°	151.9	156.2	160.6	163.5	165.1	166.5	168.0	169.5
85°	123.0	127.5	132.1	135.1	136.8	138.4	140.1	141.7
87.5°	101.3	106.2	111.0	114.2	115.7	117.3	118.8	120.2
90°	94.7	100.0	105.3	108.8	110.6	112.4	114.1	115.9
92.5°	103.2	108.4	113.8	117.3	119.0	120.6	122.3	124.0
95°	117.4	122.7	128.0	131.5	133.2	134.9	136.5	138.2
97.5°	135.5	140.5	145.6	148.9	150.4	151.9	153.6	155.1
100°	147.8	153.1	158.5	161.8	163.4	164.8	166.2	167.7
102.5°	161.0	166.2	171.5	174.9	176.5	178.0	179.5	181.1
105°	182.1	186.9	191.7	195.0	196.8	198.5	200.3	202.1
107.5°	206.3	210.7	215.2	217.9	219.2	220.4	221.7	223.0
110°	222.9	227.2	231.5	234.3	235.6	236.9	238.2	239.5





TEST NUMBER: P333218-940

CATALOG NUMBER: S125DIP-S850D590U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	239.6	243.5	247.4	250.0	251.3	252.5	253.7	254.9
115°	265.6	269.2	272.8	275.2	276.3	277.4	278.5	279.6
117.5°	291.2	294.9	298.5	300.7	301.7	302.6	303.5	304.5
120°	308.9	312.4	315.8	318.0	318.8	319.6	320.4	321.1
122.5°	325.7	329.0	332.3	334.3	335.2	336.1	336.9	337.8
125°	351.0	354.0	357.1	359.1	360.0	361.0	361.9	362.7
127.5°	375.8	378.7	381.6	383.5	384.5	385.5	386.5	387.4
130°	392.7	395.5	398.2	400.0	400.8	401.6	402.4	403.2
132.5°	408.5	411.3	414.0	415.6	416.3	416.8	417.3	417.9
135°	432.4	435.1	437.7	439.4	440.0	440.6	441.1	441.8
137.5°	456.6	459.2	461.8	463.2	463.4	463.7	464.0	464.2
140°	471.8	474.3	476.8	478.1	478.4	478.7	478.9	479.2
142.5°	487.0	489.0	491.1	492.2	492.5	492.8	493.0	493.3
145°	509.7	510.8	511.8	512.6	513.0	513.5	514.0	514.5
147.5°	531.5	532.1	532.7	532.8	532.4	532.0	531.5	531.2
150°	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.2
152.5°	558.9	559.2	559.5	559.4	559.0	558.7	558.3	557.9
155°	578.3	578.7	579.2	579.2	578.5	578.0	577.4	576.8
157.5°	595.0	595.5	595.9	595.8	595.0	594.3	593.6	592.8
160°	605.2	605.6	606.1	606.1	605.6	604.9	604.4	603.9
162.5°	614.7	615.3	615.9	615.8	615.2	614.5	613.9	613.1
165°	627.6	628.0	628.6	628.4	627.8	627.1	626.3	625.7
167.5°	637.1	637.8	638.5	638.5	637.8	637.0	636.3	635.7
170°	642.8	643.5	644.2	644.1	643.4	642.6	641.8	641.0
172.5°	646.9	647.6	648.3	648.3	647.6	646.8	646.1	645.4
175°	651.5	652.1	652.8	652.7	652.0	651.2	650.4	649.6
177.5°	653.5	654.1	654.6	654.6	654.0	653.4	652.6	652.0
180°	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7

(END OF REPORT)