

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: P333402-940

Luminaire Tested: **S125DIW-S850D470U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333402-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-7,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIW-S850D470U940-4F0-1E-UDD-D  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 470 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4598.0 lumens  
Efficiency: N/A  
Efficacy: 122.0 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

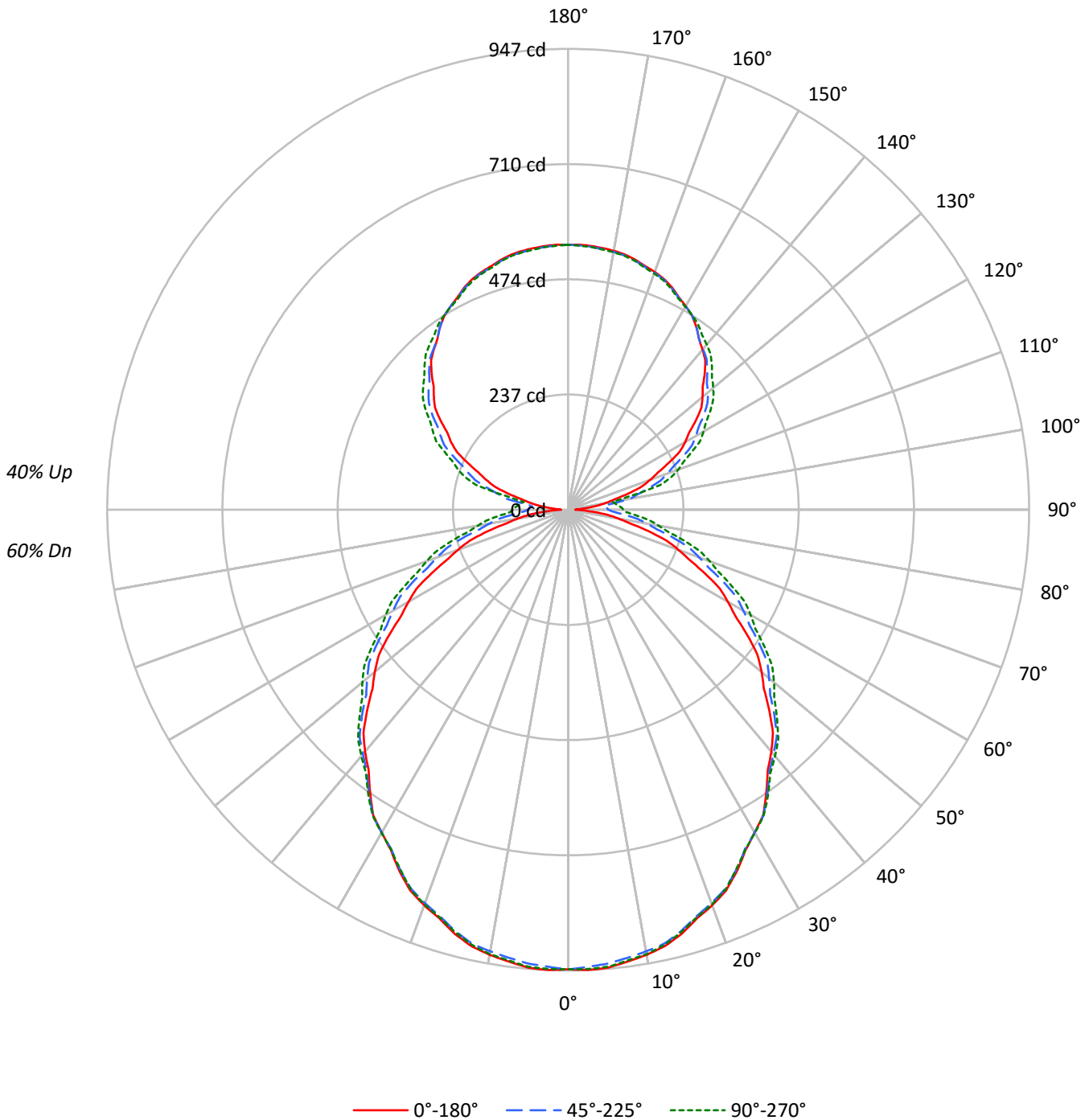
Input Watts (W): 37.7  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	89	89	89	76	76	76	65	65	65	60
1	99	94	90	86	92	88	84	81	77	74	71	66	64	62	56	55	53	49
2	90	82	75	70	84	77	71	66	67	62	58	57	54	51	49	46	44	40
3	82	72	64	58	76	67	60	55	58	53	49	50	46	43	43	40	37	33
4	75	63	55	49	69	59	52	46	52	46	41	45	40	36	38	35	32	28
5	69	56	48	42	64	53	45	39	46	40	35	40	35	31	34	31	28	25
6	63	51	42	36	59	47	40	34	42	35	31	36	31	27	31	27	24	21
7	58	46	37	32	54	43	35	30	38	32	27	33	28	24	28	24	21	19
8	54	41	33	28	50	39	32	27	34	28	24	30	25	22	26	22	19	17
9	50	38	30	25	47	36	29	24	32	26	22	28	23	19	24	20	17	15
10	47	35	27	22	44	33	26	21	29	23	19	26	21	18	22	19	16	14

**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	5.5
20°-30°	377.1	8.2
30°-40°	446.7	9.7
40°-50°	461.8	10.0
50°-60°	425.4	9.3
60°-70°	343.9	7.5
70°-80°	230.3	5.0
80°-90°	120.6	2.6
90°-100°	86.8	1.9
100°-110°	171.3	3.7
110°-120°	254.2	5.5
120°-130°	302.5	6.6
130°-140°	313.3	6.8
140°-150°	288.1	6.3
150°-160°	231.7	5.0
160°-170°	149.8	3.3
170°-180°	51.7	1.1
0°-30°	720.0	15.7
0°-40°	1166.7	25.4
0°-60°	2053.9	44.7
0°-90°	2748.7	59.8
90°-120°	512.3	11.1
90°-150°	1416.2	30.8
90°-180°	1849.0	40.2
0°-180°	4598.0	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	48	82	105	113	11
95°	35	58	74	96	103	39
105°	127	144	171	189	196	135
115°	228	238	261	276	279	226
125°	320	323	341	353	357	286
135°	397	399	404	415	417	306
145°	459	459	459	464	465	287
155°	504	502	503	504	501	232
165°	532	530	530	532	529	150
175°	544	542	542	545	542	52
180°	544	544	544	544	544	



TEST NUMBER: P333402-940

CATALOG NUMBER: S125DIW-S850D470U940-4F0-1E-UDD-D

**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	35.7	42.4	49.1	55.9	62.8	69.9	77.0	84.2	91.3	96.1
90°	15.2	22.6	29.8	37.1	44.4	51.9	59.5	67.1	74.7	82.4	87.6
92.5°	19.5	25.1	30.8	36.3	41.9	48.6	56.3	64.0	71.7	79.5	84.4
95°	35.0	40.1	45.2	50.3	55.4	59.7	63.3	66.9	70.4	74.1	79.0
97.5°	58.9	64.2	69.6	74.8	80.2	82.8	82.8	82.8	82.8	82.8	84.6
100°	77.6	82.1	86.8	91.3	95.9	101.7	108.6	115.6	122.5	129.5	120.5
102.5°	96.5	100.9	105.1	109.5	113.9	119.3	126.0	132.6	139.2	145.9	147.5
105°	127.0	130.5	134.2	137.9	141.5	146.4	152.7	158.8	165.0	171.1	175.3
107.5°	158.5	161.4	164.2	167.0	169.8	174.2	180.3	186.5	192.5	198.7	202.8
110°	179.1	181.6	184.0	186.5	189.0	193.2	199.2	205.1	211.1	217.0	220.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	199.1	201.3	203.5	205.7	207.9	211.9	217.6	223.3	229.0	234.7	238.1
115°	228.3	230.2	232.0	233.9	235.8	239.4	244.9	250.3	255.7	261.2	264.6
117.5°	258.3	259.3	260.2	261.2	262.1	265.3	270.6	276.1	281.4	286.9	289.9
120°	277.8	278.3	278.7	279.3	279.8	282.6	287.6	292.7	297.7	302.6	305.9
122.5°	294.1	294.7	295.3	296.0	296.6	299.3	304.0	308.6	313.3	318.1	321.2
125°	320.4	320.8	321.2	321.6	322.1	324.3	328.4	332.6	336.7	340.8	343.8
127.5°	344.7	344.9	345.2	345.4	345.7	347.5	350.8	354.1	357.4	360.7	363.6
130°	360.2	360.4	360.7	361.0	361.1	362.7	365.8	368.7	371.7	374.7	377.3
132.5°	375.0	375.4	375.9	376.4	376.8	378.1	380.1	382.2	384.1	386.2	389.1
135°	396.8	397.1	397.4	397.8	398.1	399.0	400.2	401.4	402.7	403.9	406.4
137.5°	416.9	417.1	417.4	417.8	418.0	418.5	419.0	419.5	420.1	420.6	423.1
140°	429.4	429.5	429.7	429.9	430.1	430.3	430.3	430.4	430.5	430.7	433.1
142.5°	441.3	441.2	441.1	441.1	441.0	441.1	441.3	441.5	441.6	441.8	443.7
145°	458.8	458.8	458.7	458.7	458.7	458.7	458.7	458.7	458.7	458.7	459.8
147.5°	473.2	473.1	473.1	473.1	473.1	473.1	473.2	473.3	473.4	473.5	473.9
150°	482.9	482.7	482.5	482.3	482.1	482.1	482.3	482.5	482.7	482.9	483.0
152.5°	492.2	491.9	491.4	491.1	490.6	490.5	490.7	490.9	491.1	491.2	491.4
155°	504.3	503.7	503.2	502.7	502.1	501.9	502.1	502.3	502.5	502.7	502.9
157.5°	513.5	513.2	512.9	512.6	512.2	512.1	512.1	512.1	512.1	512.2	512.5
160°	520.0	519.4	518.9	518.4	517.8	517.6	517.7	517.8	517.9	518.0	518.4
162.5°	525.1	524.6	524.1	523.5	523.0	522.8	522.9	523.0	523.1	523.2	523.6
165°	532.1	531.5	531.0	530.5	529.9	529.7	529.8	529.9	529.9	530.0	530.6
167.5°	537.3	536.7	536.2	535.6	535.0	534.8	534.8	534.9	535.0	535.1	535.8
170°	540.2	539.6	538.9	538.2	537.6	537.3	537.4	537.5	537.6	537.7	538.4
172.5°	542.1	541.4	540.8	540.2	539.6	539.4	539.5	539.7	539.8	540.0	540.6
175°	544.2	543.7	543.1	542.6	542.1	541.8	541.9	542.0	542.1	542.2	542.9
177.5°	545.2	544.7	544.3	543.9	543.4	543.2	543.3	543.4	543.5	543.6	544.0
180°	544.2	544.2	544.2	544.2	544.2	544.2	544.2	544.2	544.2	544.2	544.2



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CATALOG NUMBER: S125DIW-S850D470U940-4F0-1E-UDD-D

**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°	100.9	105.8	110.6	113.8	115.2	116.7	118.2	119.8
90°	92.7	97.9	103.1	106.6	108.3	109.9	111.7	113.4
92.5°	89.4	94.5	99.5	102.8	104.3	105.9	107.5	109.1
95°	84.0	89.0	94.0	97.2	98.6	100.0	101.5	102.9
97.5°	86.4	88.2	90.0	91.6	93.0	94.4	95.8	97.2
100°	111.4	102.4	93.4	89.3	90.2	91.0	91.8	92.7
102.5°	149.1	150.8	152.4	150.8	145.9	141.1	136.2	131.3
105°	179.4	183.5	187.6	190.4	191.7	193.1	194.4	195.7
107.5°	206.9	210.9	215.0	217.6	218.6	219.6	220.6	221.6
110°	224.3	227.9	231.6	234.2	235.7	237.2	238.7	240.2





TEST NUMBER: P333402-940

CATALOG NUMBER: S125DIW-S850D470U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	241.5	244.9	248.3	250.7	252.0	253.3	254.6	255.9
115°	267.9	271.3	274.6	276.6	277.3	278.0	278.7	279.4
117.5°	292.9	296.0	299.0	301.1	302.3	303.4	304.6	305.8
120°	309.2	312.5	315.9	318.0	318.7	319.5	320.3	321.1
122.5°	324.4	327.5	330.6	332.6	333.3	334.0	334.7	335.5
125°	346.7	349.6	352.5	354.4	355.2	355.9	356.7	357.4
127.5°	366.4	369.3	372.1	373.8	374.3	374.9	375.4	375.9
130°	379.9	382.5	385.1	386.7	387.3	387.9	388.4	389.1
132.5°	391.9	394.7	397.5	399.1	399.6	400.0	400.4	400.8
135°	408.9	411.4	413.9	415.4	415.9	416.4	416.9	417.4
137.5°	425.5	428.0	430.5	431.9	432.2	432.6	432.9	433.3
140°	435.6	438.0	440.4	441.8	442.1	442.4	442.6	442.9
142.5°	445.7	447.7	449.7	450.8	451.0	451.4	451.7	451.9
145°	460.9	462.0	463.2	463.9	464.1	464.4	464.7	465.0
147.5°	474.4	474.8	475.3	475.4	475.1	474.8	474.5	474.2
150°	483.2	483.4	483.6	483.4	483.0	482.4	481.9	481.3
152.5°	491.6	491.8	492.0	491.8	491.2	490.5	490.0	489.4
155°	503.2	503.5	503.7	503.5	502.7	502.0	501.3	500.6
157.5°	512.7	513.0	513.3	513.1	512.4	511.7	511.0	510.2
160°	518.7	519.1	519.4	519.2	518.5	517.8	517.1	516.4
162.5°	524.1	524.7	525.1	525.0	524.2	523.4	522.6	521.8
165°	531.2	531.7	532.3	532.2	531.5	530.7	529.9	529.2
167.5°	536.5	537.1	537.7	537.7	536.8	536.0	535.2	534.4
170°	539.1	539.9	540.6	540.6	539.8	539.0	538.1	537.3
172.5°	541.3	541.9	542.6	542.5	541.7	540.9	540.1	539.3
175°	543.6	544.3	545.0	545.0	544.2	543.4	542.6	541.8
177.5°	544.6	545.0	545.5	545.5	544.9	544.4	543.8	543.2
180°	544.2	544.2	544.2	544.2	544.2	544.2	544.2	544.2

(END OF REPORT)