

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: P333408-940

Luminaire Tested: **S125DIW-S850D770U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333408-940
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-S850D770U940-4F0-1E-UDD-D
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5664.7 lumens
Efficiency: N/A
Efficacy: 125.9 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

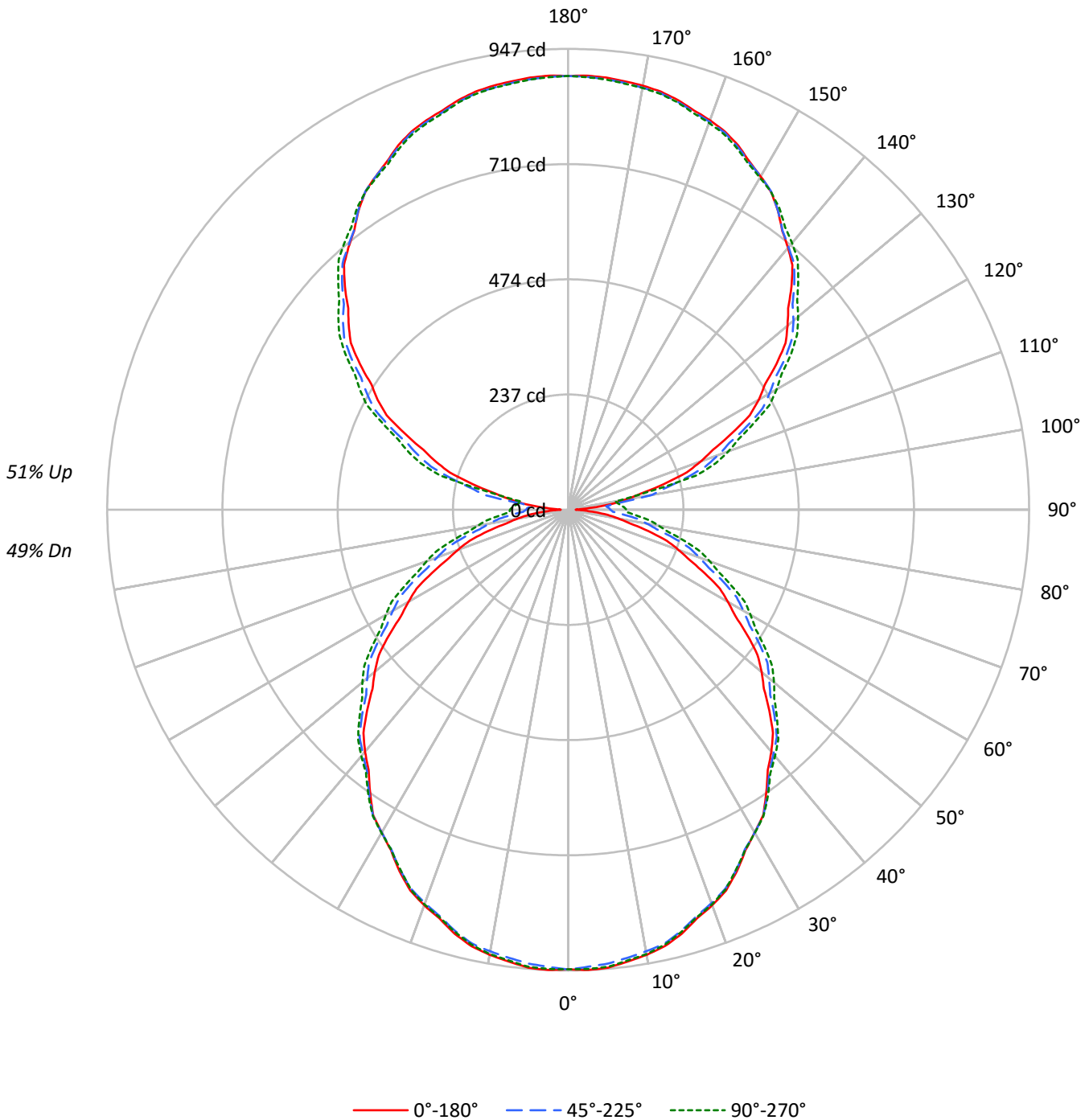
Input Watts (W): 45
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P333408-940

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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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	47	46	45	39
2	88	80	74	68	80	74	68	63	62	58	54	51	48	46	41	39	37	32
3	80	70	62	56	73	65	58	53	54	49	45	45	41	38	36	34	31	27
4	73	62	54	48	67	57	50	44	48	43	38	40	36	33	32	29	27	23
5	67	55	47	41	61	51	43	38	43	37	33	36	31	28	29	26	23	20
6	62	49	41	35	56	46	38	33	39	33	29	32	28	24	26	23	20	17
7	57	44	36	31	52	41	34	29	35	29	25	29	25	22	24	21	18	15
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	19	16	14
9	49	37	29	24	45	34	27	23	29	24	20	25	20	17	20	17	15	12
10	46	34	26	21	42	31	25	20	27	22	18	23	18	16	19	16	13	11

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	1.6
10°-20°	253.6	4.5
20°-30°	377.1	6.7
30°-40°	446.7	7.9
40°-50°	461.8	8.2
50°-60°	425.4	7.5
60°-70°	343.9	6.1
70°-80°	230.3	4.1
80°-90°	121.3	2.1
90°-100°	99.4	1.8
100°-110°	249.0	4.4
110°-120°	395.2	7.0
120°-130°	483.5	8.5
130°-140°	508.0	9.0
140°-150°	470.8	8.3
150°-160°	379.5	6.7
160°-170°	245.4	4.3
170°-180°	84.6	1.5
0°-30°	720.0	12.7
0°-40°	1166.7	20.6
0°-60°	2053.9	36.3
0°-90°	2749.4	48.5
90°-120°	743.6	13.1
90°-150°	2205.8	38.9
90°-180°	2915.0	51.5
0°-180°	5664.7	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°	16	50	86	110	120	11
95°	50	71	78	101	108	57
105°	203	221	248	266	272	215
115°	370	381	405	418	420	367
125°	522	527	545	556	560	466
135°	649	652	657	667	668	500
145°	751	751	751	756	756	469
155°	826	822	823	825	820	380
165°	872	868	868	872	867	246
175°	891	888	888	893	887	85
180°	891	891	891	891	891	



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CATALOG NUMBER: S125DIW-S850D770U940-4F0-1E-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°	29.1	35.8	42.6	49.5	56.3	63.3	70.5	77.8	84.9	92.1	97.0
90°	15.5	23.3	31.0	38.8	46.5	54.4	62.4	70.4	78.5	86.5	91.9
92.5°	23.5	28.8	34.1	39.3	44.6	51.3	59.3	67.4	75.4	83.6	88.8
95°	49.7	54.6	59.5	64.5	69.4	72.5	73.9	75.3	76.8	78.2	83.5
97.5°	89.5	95.1	100.8	106.4	112.0	112.6	108.3	104.1	99.8	95.5	95.7
100°	120.6	125.3	130.0	134.8	139.6	145.5	152.8	159.9	167.1	174.2	156.7
102.5°	152.0	156.6	161.1	165.7	170.2	175.9	182.7	189.4	196.2	203.0	203.0
105°	202.6	206.4	210.4	214.2	218.1	223.1	229.3	235.5	241.7	247.8	251.9
107.5°	255.1	257.9	260.7	263.5	266.4	270.8	277.1	283.3	289.5	295.7	299.8
110°	289.3	291.8	294.2	296.7	299.2	303.4	309.5	315.5	321.6	327.6	331.1



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CATALOG NUMBER: S125DIW-S850D770U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	322.1	324.4	326.7	329.0	331.4	335.4	341.2	347.0	352.8	358.5	361.7
115°	370.2	372.5	374.6	376.8	379.0	382.8	388.3	393.8	399.3	404.8	408.0
117.5°	420.3	421.2	422.0	422.9	423.9	427.1	432.7	438.4	444.0	449.7	452.4
120°	451.9	452.5	452.9	453.3	453.8	456.6	461.8	467.0	472.2	477.3	480.5
122.5°	479.2	480.1	480.9	481.8	482.6	485.4	490.2	495.0	499.7	504.5	507.6
125°	522.4	523.2	524.1	524.9	525.7	528.2	532.3	536.4	540.5	544.6	547.3
127.5°	562.8	563.3	563.8	564.4	564.9	566.9	570.2	573.4	576.7	580.0	582.7
130°	588.2	588.7	589.2	589.8	590.3	592.1	595.1	598.2	601.2	604.2	606.6
132.5°	612.8	613.6	614.4	615.3	616.1	617.4	619.3	621.2	623.1	625.0	627.8
135°	648.7	649.3	650.1	650.8	651.4	652.3	653.4	654.6	655.8	656.9	659.2
137.5°	681.7	682.2	682.9	683.5	684.1	684.6	685.0	685.5	685.9	686.3	688.8
140°	702.6	702.9	703.2	703.5	703.8	704.0	704.0	704.1	704.2	704.2	706.8
142.5°	722.2	722.2	722.2	722.2	722.2	722.4	722.6	722.8	723.1	723.4	725.3
145°	750.8	750.9	751.0	751.1	751.2	751.3	751.3	751.3	751.3	751.3	752.4
147.5°	775.1	775.0	774.9	774.9	774.8	774.9	775.1	775.2	775.3	775.5	776.1
150°	790.9	790.6	790.3	790.0	789.7	789.7	790.0	790.3	790.6	790.9	791.2
152.5°	806.2	805.6	804.9	804.3	803.6	803.4	803.8	804.1	804.3	804.6	804.9
155°	825.9	825.0	824.1	823.2	822.4	822.1	822.4	822.7	823.0	823.2	823.7
157.5°	841.1	840.6	840.1	839.5	839.0	838.7	838.7	838.8	838.8	838.8	839.4
160°	851.7	850.8	849.9	849.0	848.2	847.7	847.9	848.1	848.2	848.4	849.0
162.5°	860.1	859.3	858.4	857.5	856.6	856.2	856.4	856.6	856.7	856.8	857.6
165°	871.5	870.6	869.8	868.9	868.0	867.6	867.7	867.9	868.1	868.2	869.1
167.5°	879.9	879.0	878.2	877.3	876.3	875.9	876.1	876.2	876.4	876.6	877.5
170°	884.8	883.7	882.6	881.6	880.6	880.1	880.3	880.5	880.6	880.7	881.9
172.5°	887.9	886.9	885.8	884.8	883.8	883.4	883.7	884.0	884.2	884.5	885.5
175°	891.4	890.5	889.6	888.7	887.8	887.4	887.6	887.7	887.9	888.1	889.2
177.5°	892.9	892.2	891.5	890.8	890.1	889.7	889.9	890.0	890.1	890.3	891.1
180°	891.4	891.4	891.4	891.4	891.4	891.4	891.4	891.4	891.4	891.4	891.4



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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°	101.9	106.7	111.6	114.9	116.4	117.9	119.4	121.0
90°	97.5	102.9	108.3	112.1	114.0	115.8	117.7	119.6
92.5°	94.2	99.4	104.8	108.3	109.9	111.6	113.2	114.9
95°	88.7	94.0	99.2	102.5	104.0	105.5	106.9	108.3
97.5°	95.9	96.0	96.2	97.0	98.4	99.8	101.2	102.6
100°	139.1	121.5	104.0	95.6	96.2	96.8	97.5	98.2
102.5°	203.0	203.0	203.0	198.7	189.9	181.2	172.5	163.7
105°	256.1	260.2	264.3	267.0	268.3	269.6	270.9	272.2
107.5°	303.9	308.0	312.1	314.6	315.4	316.3	317.1	318.0
110°	334.6	338.0	341.5	344.0	345.6	347.2	348.8	350.4



TEST NUMBER: P333408-940

CATALOG NUMBER: S125DIW-S850D770U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	364.9	368.1	371.2	373.4	374.7	375.9	377.2	378.4
115°	411.1	414.1	417.2	419.0	419.4	419.7	420.1	420.4
117.5°	455.1	457.9	460.6	462.4	463.5	464.5	465.5	466.5
120°	483.8	487.0	490.2	492.0	492.5	493.0	493.5	494.0
122.5°	510.6	513.6	516.7	518.4	518.8	519.2	519.5	520.0
125°	550.0	552.7	555.4	557.1	557.7	558.2	558.8	559.5
127.5°	585.4	588.2	590.8	592.3	592.4	592.5	592.6	592.7
130°	609.0	611.5	613.9	615.3	615.6	615.9	616.2	616.5
132.5°	630.6	633.4	636.1	637.7	637.8	637.9	638.0	638.2
135°	661.6	664.1	666.5	667.7	667.8	668.0	668.2	668.2
137.5°	691.3	693.8	696.2	697.6	697.6	697.7	697.8	697.8
140°	709.4	711.9	714.4	715.7	715.6	715.6	715.5	715.4
142.5°	727.3	729.3	731.3	732.3	732.2	732.2	732.1	732.0
145°	753.6	754.7	756.0	756.5	756.4	756.3	756.3	756.3
147.5°	776.6	777.0	777.6	777.5	776.8	776.1	775.4	774.7
150°	791.5	791.8	792.1	791.8	790.8	789.8	788.8	787.8
152.5°	805.2	805.5	805.8	805.5	804.4	803.4	802.4	801.4
155°	824.1	824.6	825.0	824.7	823.5	822.3	821.2	819.9
157.5°	839.8	840.3	840.7	840.3	839.2	838.0	836.9	835.7
160°	849.5	850.2	850.7	850.4	849.3	848.1	846.9	845.7
162.5°	858.4	859.3	860.1	859.9	858.6	857.3	856.0	854.7
165°	870.0	870.8	871.7	871.6	870.4	869.2	868.1	866.8
167.5°	878.6	879.7	880.7	880.7	879.3	878.0	876.6	875.3
170°	883.1	884.3	885.5	885.4	884.0	882.7	881.4	880.1
172.5°	886.5	887.6	888.7	888.5	887.3	885.9	884.6	883.2
175°	890.4	891.5	892.7	892.6	891.4	890.0	888.7	887.3
177.5°	891.9	892.7	893.6	893.5	892.5	891.6	890.6	889.7
180°	891.4	891.4	891.4	891.4	891.4	891.4	891.4	891.4

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