

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: P333409

Luminaire Tested: **S125DIW-S850D770U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333409  
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: S125DIW-S850D770U835-4F0-1E-UDD-D1  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5945.0 lumens  
Efficiency: N/A  
Efficacy: 132.1 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

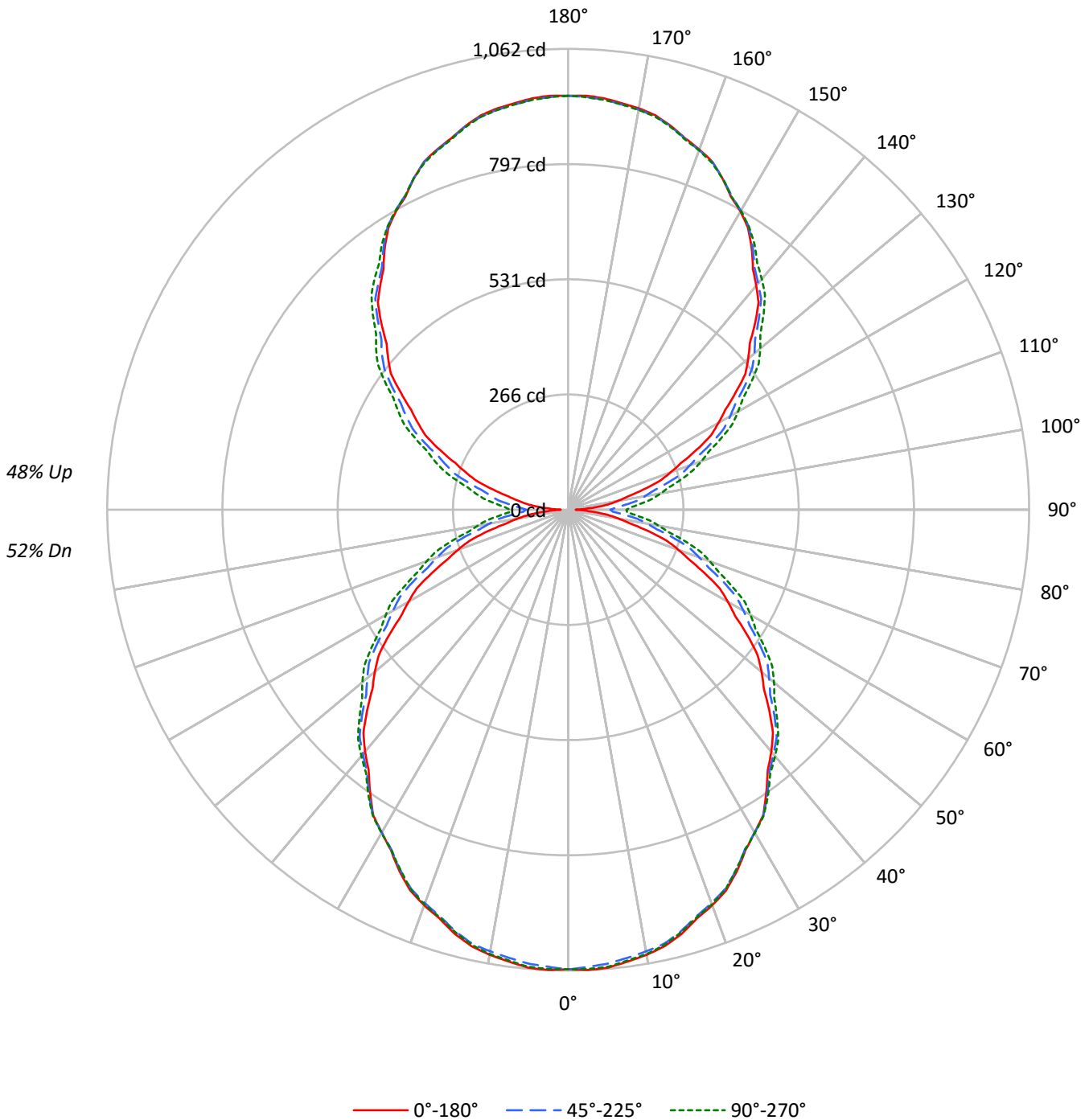
Input Watts (W): 45  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	108	108	108	99	99	99	99	84	84	84	71	71	71	58	58	58	52
1	97	93	89	85	90	86	82	79	73	70	68	61	59	57	50	49	47	42
2	88	81	74	69	81	75	69	64	63	59	55	53	50	47	43	41	39	35
3	80	71	63	57	74	65	59	53	56	50	46	47	43	40	38	35	33	29
4	73	62	54	48	68	58	51	45	49	44	39	41	37	34	34	31	28	25
5	67	55	47	41	62	51	44	38	44	38	34	37	33	29	31	27	25	21
6	62	50	41	35	57	46	39	33	40	34	29	33	29	25	28	24	21	19
7	57	45	37	31	53	42	34	29	36	30	26	30	26	22	25	22	19	16
8	53	41	33	27	49	38	31	26	33	27	23	28	23	20	23	20	17	15
9	50	37	29	24	46	35	28	23	30	24	20	26	21	18	21	18	15	13
10	46	34	27	22	43	32	25	21	28	22	18	24	19	16	20	16	14	12

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

	0°	45°	90°
0°	6841	6841	6841
5°	6855	6715	6737
10°	6806	6595	6585
15°	6726	6452	6393
20°	6616	6274	6201
25°	6486	6084	5964
30°	6329	5876	5749
35°	6182	5684	5552
40°	6032	5481	5353
45°	5863	5308	5178
50°	5702	5120	5022
55°	5508	4943	4839
60°	5296	4741	4653
65°	5075	4530	4443
70°	4822	4240	4228
75°	4425	3962	3962
80°	3905	3625	3673
85°	3417	3398	3583



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.2	1.7
10°-20°	284.4	4.8
20°-30°	422.9	7.1
30°-40°	500.9	8.4
40°-50°	517.9	8.7
50°-60°	477.1	8.0
60°-70°	385.7	6.5
70°-80°	258.3	4.3
80°-90°	136.0	2.3
90°-100°	139.0	2.3
100°-110°	244.1	4.1
110°-120°	356.7	6.0
120°-130°	441.6	7.4
130°-140°	480.5	8.1
140°-150°	463.7	7.8
150°-160°	387.9	6.5
160°-170°	257.9	4.3
170°-180°	90.2	1.5
0°-30°	807.4	13.6
0°-40°	1308.3	22.0
0°-60°	2303.3	38.7
0°-90°	3083.3	51.9
90°-120°	739.8	12.4
90°-150°	2125.7	35.8
90°-180°	2862.0	48.1
0°-180°	5945.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1059	1059	1059	1059	1059	
5°	1059	1057	1050	1058	1057	100
15°	1012	1012	1005	1011	1007	285
25°	919	922	916	920	915	423
35°	796	802	800	803	803	498
45°	655	666	672	679	680	506
55°	504	520	537	548	552	450
65°	347	371	396	411	415	344
75°	191	218	251	271	277	203
85°	57	92	128	150	159	61
90°	17	57	97	124	134	14
95°	62	91	133	160	170	62
105°	179	200	234	259	269	191
115°	326	337	365	382	388	323
125°	471	476	496	511	516	422
135°	609	613	621	634	636	469
145°	737	739	741	746	748	460
155°	842	842	843	845	842	388
165°	915	914	915	917	913	258
175°	952	949	949	953	948	90
180°	954	954	954	954	954	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3
2.5°	1061.8	1061.5	1061.1	1060.7	1060.3	1059.5	1058.2	1056.9	1055.6	1054.3	1055.6
5°	1059.3	1058.9	1058.4	1057.9	1057.5	1056.4	1054.8	1053.2	1051.6	1050.0	1051.8
7.5°	1050.0	1049.8	1049.6	1049.4	1049.2	1048.3	1046.7	1045.0	1043.3	1041.7	1043.3
10°	1041.7	1041.7	1041.7	1041.7	1041.7	1040.8	1038.9	1037.1	1035.2	1033.4	1035.0
12.5°	1030.0	1030.2	1030.4	1030.6	1030.8	1030.1	1028.7	1027.2	1025.7	1024.2	1025.5
15°	1011.6	1011.8	1012.0	1012.2	1012.5	1011.8	1010.2	1008.6	1006.9	1005.3	1006.7
17.5°	987.5	987.9	988.4	988.8	989.3	988.7	987.1	985.5	983.9	982.3	983.3
20°	970.0	970.5	970.9	971.4	971.9	971.3	969.7	968.1	966.4	964.8	965.5
22.5°	950.1	950.9	951.7	952.6	953.4	952.9	951.1	949.3	947.5	945.7	946.6
25°	919.1	919.8	920.5	921.2	921.9	921.5	920.2	918.8	917.4	916.0	916.9
27.5°	884.6	885.7	886.7	887.7	888.7	888.4	886.9	885.3	883.7	882.2	882.8
30°	858.9	860.3	861.7	863.0	864.4	864.4	863.0	861.7	860.3	858.9	859.4
32.5°	835.6	836.8	838.0	839.2	840.4	840.5	839.5	838.5	837.5	836.5	836.9
35°	795.5	797.2	798.8	800.4	802.0	802.5	801.8	801.1	800.4	799.7	800.4
37.5°	755.4	756.9	758.4	759.9	761.4	762.0	761.7	761.5	761.3	761.1	762.0
40°	728.0	729.9	731.7	733.6	735.4	736.2	736.0	735.8	735.5	735.3	736.2
42.5°	698.1	700.5	702.9	705.3	707.7	709.2	709.7	710.2	710.7	711.2	712.3
45°	655.3	657.9	660.4	662.9	665.5	667.3	668.5	669.6	670.8	671.9	673.6
47.5°	611.5	613.9	616.2	618.6	620.9	623.1	625.1	627.1	629.0	631.0	633.4
50°	581.6	584.1	586.7	589.2	591.7	594.3	596.8	599.4	601.9	604.4	607.0
52.5°	550.0	553.1	556.2	559.3	562.4	565.5	568.6	571.7	574.8	577.9	580.6
55°	503.7	507.4	511.1	514.8	518.5	522.2	525.9	529.6	533.2	536.9	539.5
57.5°	456.3	460.8	465.2	469.6	474.1	478.4	482.7	486.9	491.1	495.4	498.3
60°	424.8	429.4	434.0	438.6	443.2	447.9	452.5	457.1	461.7	466.3	469.8
62.5°	394.0	398.6	403.3	407.9	412.5	417.3	422.3	427.3	432.2	437.2	441.1
65°	346.9	352.2	357.5	362.8	368.1	373.5	379.1	384.6	390.2	395.7	399.2
67.5°	302.4	307.6	312.7	317.8	322.9	328.3	333.9	339.6	345.2	350.8	355.0
70°	270.0	275.3	280.6	286.0	291.3	296.9	302.9	308.9	314.9	320.9	325.3
72.5°	238.5	243.9	249.4	254.9	260.4	266.4	273.0	279.6	286.1	292.7	297.4
75°	191.1	197.1	203.1	209.1	215.1	221.8	229.2	236.6	243.9	251.3	255.9
77.5°	145.6	152.5	159.5	166.4	173.3	180.3	187.4	194.5	201.6	208.8	213.8
80°	117.4	124.3	131.2	138.1	145.1	152.4	160.3	168.1	176.0	183.8	188.9
82.5°	91.6	98.9	106.2	113.5	120.8	128.4	136.5	144.5	152.5	160.6	165.5
85°	57.1	64.7	72.4	80.0	87.6	95.4	103.5	111.6	119.7	127.7	132.8
87.5°	32.6	40.2	47.9	55.5	63.1	71.0	79.1	87.2	95.2	103.3	108.8
90°	17.4	26.1	34.8	43.5	52.2	61.0	70.0	79.0	88.0	97.0	103.2
92.5°	32.9	40.7	48.4	56.2	63.9	72.5	82.0	91.4	100.9	110.3	116.6
95°	61.8	68.1	74.4	80.7	87.1	95.0	104.5	114.0	123.5	133.0	139.2
97.5°	92.4	98.0	103.5	109.0	114.6	122.2	132.1	141.9	151.8	161.6	167.6
100°	115.4	120.2	125.0	129.9	134.7	141.9	151.5	161.0	170.5	180.0	186.4
102.5°	140.1	145.2	150.3	155.5	160.6	167.3	175.6	183.9	192.2	200.5	206.8
105°	178.6	183.1	187.6	192.2	196.7	202.9	210.8	218.7	226.6	234.5	240.1
107.5°	221.3	225.3	229.2	233.2	237.2	242.8	250.2	257.7	265.1	272.5	277.5
110°	250.8	254.4	257.9	261.5	265.1	270.4	277.4	284.3	291.3	298.2	303.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	281.6	284.3	286.9	289.6	292.2	297.0	303.9	310.8	317.7	324.6	329.0
115°	326.2	328.5	330.7	333.0	335.3	339.6	345.9	352.2	358.6	364.9	368.9
117.5°	370.9	372.2	373.6	374.9	376.3	380.0	385.9	391.9	397.9	403.9	407.9
120°	399.4	400.9	402.4	403.9	405.4	408.9	414.4	419.9	425.4	430.8	434.8
122.5°	429.4	430.0	430.7	431.3	431.9	435.0	440.5	446.1	451.7	457.2	460.8
125°	471.1	471.8	472.6	473.4	474.1	476.9	481.7	486.5	491.2	496.0	499.4
127.5°	514.6	514.9	515.3	515.6	515.9	518.1	522.1	526.0	530.0	534.0	537.3
130°	541.3	541.9	542.5	543.1	543.7	545.8	549.3	552.9	556.5	560.0	563.1
132.5°	567.2	568.5	569.8	571.1	572.4	574.3	576.7	579.2	581.6	584.0	587.1
135°	609.3	610.1	610.8	611.6	612.4	613.6	615.4	617.2	619.0	620.7	623.7
137.5°	648.9	649.7	650.4	651.2	652.0	652.9	654.1	655.2	656.4	657.5	660.5
140°	673.6	674.4	675.3	676.1	676.9	677.7	678.4	679.1	679.9	680.6	683.5
142.5°	699.1	699.7	700.2	700.7	701.2	701.8	702.4	703.1	703.8	704.5	706.8
145°	736.7	737.1	737.6	738.0	738.4	738.9	739.4	739.9	740.4	740.9	742.0
147.5°	770.4	770.8	771.1	771.5	771.9	772.2	772.6	773.0	773.4	773.8	774.6
150°	793.6	793.4	793.2	793.1	792.9	793.2	793.8	794.5	795.1	795.8	795.8
152.5°	812.6	812.8	813.0	813.3	813.5	813.7	814.0	814.3	814.5	814.8	815.2
155°	841.8	841.8	841.8	841.8	841.8	841.9	842.1	842.2	842.4	842.6	843.2
157.5°	868.0	867.6	867.2	866.9	866.5	866.4	866.6	866.7	866.9	867.1	867.7
160°	883.4	882.9	882.4	881.9	881.4	881.2	881.4	881.6	881.7	881.9	882.6
162.5°	897.1	896.7	896.3	896.0	895.6	895.4	895.5	895.5	895.5	895.6	896.4
165°	915.3	915.0	914.7	914.3	914.0	913.9	914.1	914.2	914.4	914.6	915.2
167.5°	930.8	930.1	929.4	928.8	928.1	927.8	927.8	927.8	927.8	927.8	928.8
170°	939.1	938.4	937.7	937.1	936.4	936.1	936.1	936.1	936.1	936.1	937.1
172.5°	945.0	944.3	943.7	943.0	942.4	942.0	942.0	942.0	942.0	942.0	943.0
175°	951.7	951.0	950.4	949.7	949.0	948.7	948.7	948.7	948.7	948.7	949.7
177.5°	955.1	954.6	954.0	953.5	953.0	952.7	952.5	952.4	952.3	952.1	952.9
180°	953.9	953.9	953.9	953.9	953.9	953.9	953.9	953.9	953.9	953.9	953.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3	1059.3
2.5°	1056.9	1058.2	1059.5	1060.1	1059.9	1059.7	1059.5	1059.3
5°	1053.7	1055.5	1057.4	1058.2	1057.9	1057.7	1057.5	1057.3
7.5°	1044.9	1046.5	1048.1	1048.8	1048.6	1048.4	1048.1	1047.9
10°	1036.6	1038.2	1039.8	1040.5	1040.3	1040.1	1039.8	1039.6
12.5°	1026.7	1028.0	1029.2	1029.5	1028.9	1028.3	1027.7	1027.1
15°	1008.1	1009.5	1010.9	1011.1	1010.2	1009.2	1008.3	1007.4
17.5°	984.4	985.5	986.5	986.8	986.2	985.7	985.1	984.6
20°	966.2	966.9	967.6	967.9	967.9	967.9	967.9	967.9
22.5°	947.5	948.3	949.2	949.4	948.8	948.3	947.7	947.2
25°	917.9	918.8	919.7	919.6	918.4	917.3	916.1	915.0
27.5°	883.4	884.1	884.7	884.9	884.4	884.0	883.6	883.2
30°	859.8	860.3	860.7	860.9	860.6	860.4	860.2	859.9
32.5°	837.4	837.8	838.3	838.4	838.2	838.0	837.7	837.5
35°	801.1	801.8	802.5	802.8	802.8	802.8	802.8	802.8
37.5°	762.9	763.8	764.7	765.2	765.1	765.0	764.9	764.8
40°	737.1	738.1	739.0	739.7	740.1	740.6	741.1	741.5
42.5°	713.4	714.5	715.6	716.2	716.3	716.4	716.5	716.6
45°	675.2	676.8	678.4	679.3	679.6	679.8	680.0	680.3
47.5°	635.7	638.1	640.4	641.9	642.4	642.9	643.4	643.9
50°	609.5	612.1	614.6	616.2	616.9	617.6	618.3	619.0
52.5°	583.3	586.0	588.7	590.4	590.9	591.4	591.9	592.4
55°	542.0	544.6	547.1	548.8	549.7	550.7	551.6	552.5
57.5°	501.2	504.1	507.0	508.8	509.5	510.2	510.9	511.6
60°	473.2	476.7	480.2	482.2	482.9	483.6	484.3	485.0
62.5°	444.9	448.7	452.6	454.9	455.8	456.7	457.5	458.4
65°	402.6	406.1	409.5	411.7	412.7	413.6	414.5	415.4
67.5°	359.2	363.4	367.6	370.3	371.5	372.7	373.9	375.1
70°	329.7	334.1	338.5	341.3	342.7	344.1	345.5	346.9
72.5°	302.2	306.9	311.7	314.6	315.6	316.6	317.6	318.6
75°	260.6	265.2	269.8	272.7	273.8	275.0	276.1	277.3
77.5°	218.9	224.0	229.1	232.1	233.0	233.9	234.8	235.8
80°	194.0	199.1	204.1	207.1	208.1	209.0	209.9	210.8
82.5°	170.3	175.2	180.1	183.4	185.1	186.7	188.4	190.1
85°	137.9	143.0	148.1	151.5	153.4	155.2	157.1	158.9
87.5°	114.3	119.7	125.2	128.8	130.5	132.2	134.0	135.7
90°	109.3	115.4	121.6	125.7	127.8	129.9	132.0	134.1
92.5°	122.8	129.0	135.2	139.3	141.3	143.2	145.2	147.2
95°	145.4	151.7	157.9	162.0	163.9	165.9	167.8	169.8
97.5°	173.5	179.4	185.4	189.2	191.0	192.8	194.5	196.3
100°	192.7	199.0	205.4	209.4	211.1	212.8	214.5	216.3
102.5°	213.0	219.3	225.6	229.7	231.5	233.3	235.2	237.0
105°	245.8	251.4	257.0	260.8	262.9	265.0	267.2	269.3
107.5°	282.6	287.7	292.7	296.0	297.4	298.7	300.1	301.5
110°	308.0	312.9	317.8	320.9	322.4	323.8	325.3	326.7





TEST NUMBER: P333409

CATALOG NUMBER: S125DIW-S850D770U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	333.5	337.9	342.3	345.2	346.5	347.8	349.2	350.5
115°	372.9	376.9	380.9	383.5	384.7	385.9	387.1	388.4
117.5°	412.0	416.0	420.1	422.6	423.5	424.4	425.3	426.2
120°	438.7	442.6	446.5	448.9	449.6	450.3	451.0	451.8
122.5°	464.4	468.0	471.6	473.9	474.7	475.6	476.4	477.3
125°	502.7	506.1	509.5	511.6	512.6	513.6	514.6	515.6
127.5°	540.5	543.8	547.0	549.1	550.1	551.2	552.2	553.2
130°	566.1	569.2	572.3	574.2	575.0	575.9	576.7	577.5
132.5°	590.1	593.2	596.3	598.1	598.6	599.1	599.6	600.1
135°	626.7	629.7	632.7	634.5	635.0	635.5	636.0	636.5
137.5°	663.4	666.3	669.2	670.7	670.8	670.9	671.0	671.1
140°	686.3	689.2	692.1	693.5	693.6	693.7	693.8	693.9
142.5°	709.2	711.6	713.9	715.2	715.3	715.4	715.5	715.6
145°	743.2	744.3	745.5	746.3	746.7	747.1	747.6	748.0
147.5°	775.4	776.1	776.9	776.9	776.2	775.5	774.8	774.1
150°	795.8	795.8	795.8	795.7	795.6	795.5	795.4	795.4
152.5°	815.6	816.0	816.4	816.3	815.8	815.2	814.7	814.1
155°	843.9	844.5	845.2	845.1	844.3	843.5	842.6	841.8
157.5°	868.4	869.0	869.7	869.5	868.4	867.3	866.2	865.1
160°	883.2	883.9	884.5	884.5	883.6	882.8	882.0	881.2
162.5°	897.2	897.9	898.7	898.7	897.7	896.7	895.8	894.8
165°	915.9	916.6	917.2	917.0	916.1	915.1	914.1	913.1
167.5°	929.8	930.8	931.7	931.7	930.7	929.7	928.7	927.6
170°	938.1	939.1	940.1	940.0	938.8	937.7	936.5	935.4
172.5°	944.0	945.0	946.0	946.0	945.0	943.9	942.9	941.9
175°	950.7	951.7	952.7	952.6	951.4	950.3	949.1	948.0
177.5°	953.7	954.5	955.3	955.2	954.3	953.4	952.5	951.5
180°	953.9	953.9	953.9	953.9	953.9	953.9	953.9	953.9

(END OF REPORT)