

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: P333402-830

Luminaire Tested: **S125DIW-S850D470U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333402-830  
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-S850D470U830-4F0-1E-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: 4860.2 lumens  
Efficiency: N/A  
Efficacy: 128.9 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

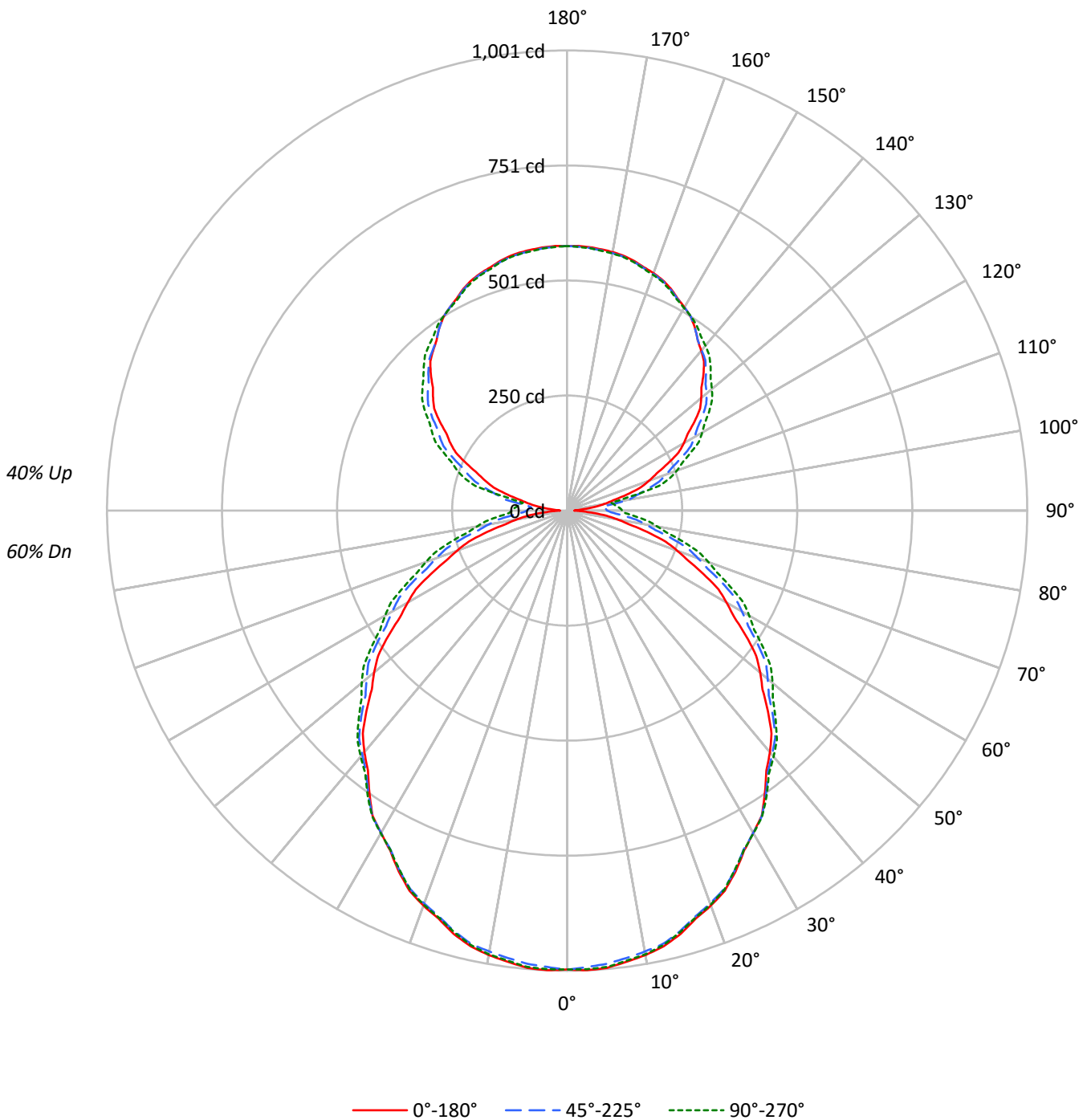
Input Watts (W): 37.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P333402-830

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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°	6448	6448	6448
5°	6461	6330	6350
10°	6415	6216	6207
15°	6340	6081	6026
20°	6237	5914	5845
25°	6114	5735	5621
30°	5965	5538	5419
35°	5827	5357	5233
40°	5686	5166	5046
45°	5526	5003	4880
50°	5375	4826	4733
55°	5192	4659	4561
60°	4992	4468	4385
65°	4783	4270	4187
70°	4546	3997	3985
75°	4170	3735	3735
80°	3682	3416	3463
85°	3220	3204	3378



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.4	1.9
10°-20°	268.0	5.5
20°-30°	398.6	8.2
30°-40°	472.1	9.7
40°-50°	488.1	10.0
50°-60°	449.7	9.3
60°-70°	363.5	7.5
70°-80°	243.4	5.0
80°-90°	127.5	2.6
90°-100°	91.7	1.9
100°-110°	181.1	3.7
110°-120°	268.6	5.5
120°-130°	319.7	6.6
130°-140°	331.2	6.8
140°-150°	304.5	6.3
150°-160°	244.9	5.0
160°-170°	158.4	3.3
170°-180°	54.6	1.1
0°-30°	761.0	15.7
0°-40°	1233.2	25.4
0°-60°	2171.0	44.7
0°-90°	2905.4	59.8
90°-120°	541.5	11.1
90°-150°	1496.9	30.8
90°-180°	1955.0	40.2
0°-180°	4860.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	998	998	998	998	998	
5°	998	996	990	997	997	95
15°	954	954	948	953	950	268
25°	866	869	863	867	862	399
35°	750	756	754	757	757	469
45°	618	628	633	640	641	477
55°	475	490	506	516	521	424
65°	327	349	373	387	392	324
75°	180	206	237	256	261	191
85°	54	86	120	141	150	57
90°	16	51	87	111	120	11
95°	37	61	78	101	109	41
105°	134	152	181	200	207	142
115°	241	251	276	291	295	239
125°	339	342	360	374	378	302
135°	419	421	427	438	441	323
145°	485	485	485	490	492	303
155°	533	531	531	532	529	245
165°	562	560	560	563	559	159
175°	575	573	573	576	573	55
180°	575	575	575	575	575	



TEST NUMBER: P333402-830

CATALOG NUMBER: S125DIW-S850D470U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4
2.5°	1000.8	1000.5	1000.1	999.8	999.4	998.6	997.4	996.2	994.9	993.7	994.9
5°	998.4	998.1	997.6	997.1	996.7	995.7	994.2	992.7	991.2	989.7	991.4
7.5°	989.7	989.5	989.3	989.1	988.9	988.1	986.6	985.0	983.4	981.8	983.4
10°	981.8	981.8	981.8	981.8	981.8	981.0	979.2	977.5	975.7	974.0	975.5
12.5°	970.8	971.0	971.2	971.4	971.6	970.9	969.6	968.2	966.8	965.4	966.6
15°	953.5	953.7	953.9	954.0	954.3	953.7	952.2	950.6	949.0	947.5	948.9
17.5°	930.8	931.1	931.6	932.0	932.5	931.9	930.4	928.9	927.4	925.9	926.8
20°	914.3	914.7	915.1	915.6	916.1	915.5	914.0	912.5	910.9	909.4	910.0
22.5°	895.5	896.3	897.0	897.9	898.6	898.1	896.5	894.8	893.1	891.4	892.2
25°	866.3	867.0	867.6	868.3	868.9	868.6	867.3	866.0	864.7	863.4	864.2
27.5°	833.8	834.8	835.8	836.7	837.6	837.4	835.9	834.4	832.9	831.5	832.1
30°	809.5	810.9	812.2	813.4	814.7	814.7	813.4	812.2	810.9	809.5	810.0
32.5°	787.6	788.7	789.9	791.0	792.1	792.2	791.3	790.3	789.4	788.4	788.8
35°	749.8	751.4	752.9	754.4	755.9	756.4	755.7	755.1	754.4	753.8	754.4
37.5°	712.0	713.4	714.8	716.2	717.7	718.2	717.9	717.7	717.6	717.4	718.2
40°	686.2	688.0	689.7	691.4	693.1	693.9	693.7	693.5	693.2	693.1	693.9
42.5°	658.0	660.3	662.5	664.8	667.0	668.5	668.9	669.4	669.9	670.3	671.4
45°	617.6	620.1	622.5	624.8	627.3	629.0	630.1	631.1	632.3	633.3	634.9
47.5°	576.4	578.6	580.8	583.1	585.2	587.3	589.2	591.1	592.9	594.7	597.0
50°	548.2	550.5	553.0	555.3	557.7	560.2	562.5	565.0	567.3	569.7	572.1
52.5°	518.4	521.3	524.2	527.2	530.1	533.0	535.9	538.9	541.8	544.7	547.2
55°	474.8	478.2	481.7	485.2	488.7	492.2	495.7	499.2	502.6	506.1	508.5
57.5°	430.1	434.3	438.5	442.6	446.9	450.9	455.0	458.9	462.9	466.9	469.7
60°	400.4	404.7	409.1	413.4	417.7	422.2	426.5	430.8	435.2	439.5	442.8
62.5°	371.4	375.7	380.1	384.5	388.8	393.3	398.0	402.7	407.4	412.1	415.8
65°	327.0	332.0	337.0	342.0	346.9	352.0	357.3	362.5	367.8	373.0	376.3
67.5°	285.0	289.9	294.7	299.5	304.3	309.4	314.7	320.1	325.4	330.6	334.6
70°	254.5	259.5	264.5	269.6	274.6	279.8	285.5	291.2	296.8	302.5	306.6
72.5°	224.8	229.9	235.1	240.3	245.4	251.1	257.3	263.5	269.7	275.9	280.3
75°	180.1	185.8	191.4	197.1	202.7	209.1	216.0	223.0	229.9	236.9	241.2
77.5°	137.2	143.7	150.3	156.8	163.3	169.9	176.6	183.3	190.0	196.8	201.5
80°	110.7	117.2	123.7	130.2	136.8	143.6	151.1	158.4	165.9	173.2	178.0
82.5°	86.3	93.2	100.1	107.0	113.9	121.0	128.7	136.2	143.7	151.4	156.0
85°	53.8	61.0	68.2	75.4	82.6	89.9	97.6	105.2	112.8	120.4	125.2
87.5°	30.6	37.7	44.9	51.9	59.1	66.4	73.9	81.4	89.0	96.5	101.6
90°	16.1	23.8	31.5	39.2	46.9	54.9	62.9	71.0	79.0	87.1	92.6
92.5°	20.6	26.6	32.5	38.4	44.3	51.4	59.5	67.7	75.8	84.0	89.3
95°	37.0	42.4	47.8	53.2	58.5	63.1	66.9	70.7	74.5	78.3	83.5
97.5°	62.3	67.9	73.5	79.1	84.7	87.5	87.6	87.6	87.6	87.6	89.4
100°	82.0	86.8	91.7	96.5	101.4	107.4	114.8	122.2	129.5	136.9	127.3
102.5°	102.0	106.6	111.1	115.7	120.4	126.1	133.2	140.2	147.1	154.2	155.9
105°	134.2	138.0	141.9	145.7	149.6	154.8	161.4	167.9	174.4	180.9	185.3
107.5°	167.6	170.6	173.5	176.5	179.5	184.2	190.6	197.1	203.5	210.0	214.3
110°	189.4	192.0	194.5	197.2	199.8	204.2	210.6	216.8	223.1	229.3	233.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	210.5	212.8	215.1	217.4	219.8	223.9	230.0	236.0	242.0	248.1	251.7
115°	241.3	243.3	245.2	247.2	249.2	253.1	258.8	264.6	270.3	276.1	279.7
117.5°	273.1	274.1	275.0	276.1	277.0	280.4	286.1	291.8	297.5	303.2	306.4
120°	293.6	294.2	294.6	295.2	295.8	298.7	304.0	309.3	314.6	319.9	323.4
122.5°	310.9	311.5	312.2	312.8	313.5	316.3	321.3	326.2	331.2	336.2	339.5
125°	338.7	339.1	339.5	340.0	340.4	342.8	347.1	351.6	355.9	360.2	363.4
127.5°	364.4	364.6	364.9	365.1	365.4	367.3	370.8	374.3	377.8	381.3	384.3
130°	380.7	381.0	381.3	381.5	381.7	383.4	386.6	389.7	392.9	396.1	398.8
132.5°	396.3	396.8	397.4	397.8	398.3	399.6	401.8	404.0	406.0	408.2	411.2
135°	419.4	419.7	420.1	420.5	420.8	421.7	423.0	424.3	425.7	427.0	429.6
137.5°	440.6	440.9	441.2	441.6	441.9	442.3	442.9	443.5	444.0	444.6	447.2
140°	453.8	454.0	454.2	454.4	454.6	454.8	454.9	455.0	455.1	455.2	457.8
142.5°	466.5	466.4	466.3	466.3	466.2	466.3	466.5	466.7	466.7	466.9	469.0
145°	484.9	484.9	484.8	484.8	484.8	484.8	484.8	484.8	484.8	484.8	486.0
147.5°	500.2	500.1	500.1	500.0	500.0	500.0	500.2	500.3	500.4	500.5	501.0
150°	510.4	510.2	510.0	509.8	509.6	509.6	509.8	510.0	510.2	510.4	510.6
152.5°	520.3	519.9	519.4	519.1	518.6	518.5	518.7	518.9	519.1	519.2	519.4
155°	533.0	532.4	531.9	531.3	530.7	530.6	530.7	530.9	531.1	531.3	531.6
157.5°	542.8	542.4	542.2	541.8	541.4	541.3	541.3	541.3	541.3	541.4	541.7
160°	549.6	549.0	548.5	547.9	547.3	547.1	547.2	547.3	547.4	547.5	547.9
162.5°	555.1	554.5	553.9	553.4	552.8	552.6	552.7	552.8	552.9	553.0	553.5
165°	562.4	561.8	561.3	560.7	560.2	559.9	560.0	560.1	560.2	560.2	560.8
167.5°	567.9	567.3	566.8	566.1	565.5	565.2	565.3	565.4	565.5	565.6	566.4
170°	571.0	570.3	569.6	568.9	568.3	568.0	568.1	568.2	568.3	568.4	569.1
172.5°	573.0	572.3	571.7	571.0	570.3	570.1	570.2	570.4	570.6	570.8	571.5
175°	575.2	574.7	574.1	573.5	573.0	572.7	572.8	572.9	573.0	573.1	573.8
177.5°	576.3	575.8	575.3	574.9	574.4	574.2	574.3	574.4	574.5	574.6	575.0
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4
2.5°	996.2	997.4	998.6	999.2	999.0	998.8	998.6	998.4
5°	993.2	994.9	996.6	997.4	997.1	996.9	996.7	996.6
7.5°	984.9	986.4	987.9	988.5	988.4	988.2	987.9	987.7
10°	977.0	978.5	980.1	980.7	980.5	980.3	980.1	979.9
12.5°	967.7	968.9	970.1	970.3	969.8	969.2	968.7	968.1
15°	950.2	951.5	952.8	953.0	952.2	951.2	950.4	949.5
17.5°	927.8	928.9	929.8	930.1	929.5	929.1	928.5	928.0
20°	910.7	911.3	912.0	912.3	912.3	912.3	912.3	912.3
22.5°	893.1	893.8	894.7	894.8	894.3	893.8	893.2	892.8
25°	865.2	866.0	866.9	866.8	865.6	864.6	863.5	862.4
27.5°	832.6	833.3	833.9	834.1	833.6	833.2	832.8	832.5
30°	810.4	810.9	811.2	811.4	811.2	811.0	810.8	810.5
32.5°	789.3	789.7	790.1	790.2	790.0	789.9	789.6	789.4
35°	755.1	755.7	756.4	756.7	756.7	756.7	756.7	756.7
37.5°	719.1	719.9	720.8	721.2	721.1	721.0	721.0	720.9
40°	694.7	695.7	696.5	697.2	697.6	698.0	698.5	698.9
42.5°	672.4	673.4	674.5	675.0	675.1	675.2	675.3	675.4
45°	636.4	637.9	639.4	640.3	640.6	640.7	640.9	641.2
47.5°	599.2	601.4	603.6	605.0	605.5	606.0	606.4	606.9
50°	574.5	576.9	579.3	580.8	581.5	582.1	582.8	583.4
52.5°	549.8	552.3	554.9	556.5	556.9	557.4	557.9	558.4
55°	510.9	513.3	515.7	517.3	518.1	519.1	519.9	520.8
57.5°	472.4	475.1	477.9	479.6	480.2	480.9	481.5	482.2
60°	446.0	449.3	452.6	454.5	455.2	455.8	456.5	457.1
62.5°	419.3	422.9	426.6	428.8	429.6	430.5	431.2	432.1
65°	379.5	382.8	386.0	388.0	389.0	389.8	390.7	391.5
67.5°	338.6	342.5	346.5	349.0	350.2	351.3	352.4	353.5
70°	310.8	314.9	319.1	321.7	323.0	324.3	325.6	327.0
72.5°	284.8	289.3	293.8	296.5	297.5	298.4	299.4	300.3
75°	245.6	250.0	254.3	257.0	258.1	259.2	260.2	261.4
77.5°	206.3	211.1	215.9	218.8	219.6	220.5	221.3	222.3
80°	182.9	187.7	192.4	195.2	196.1	197.0	197.8	198.7
82.5°	160.5	165.1	169.8	172.9	174.5	176.0	177.6	179.2
85°	130.0	134.8	139.6	142.8	144.6	146.3	148.1	149.8
87.5°	106.7	111.8	116.9	120.3	121.8	123.4	125.0	126.6
90°	98.0	103.5	109.0	112.6	114.4	116.2	118.1	119.9
92.5°	94.5	99.9	105.2	108.7	110.3	112.0	113.6	115.3
95°	88.8	94.1	99.3	102.7	104.2	105.8	107.3	108.8
97.5°	91.3	93.2	95.1	96.8	98.3	99.8	101.2	102.7
100°	117.7	108.2	98.7	94.3	95.3	96.1	97.1	98.0
102.5°	157.6	159.4	161.1	159.4	154.2	149.1	143.9	138.8
105°	189.6	194.0	198.3	201.2	202.6	204.1	205.5	206.9
107.5°	218.7	222.9	227.2	230.0	231.0	232.1	233.2	234.2
110°	237.0	240.9	244.8	247.5	249.1	250.7	252.3	253.9





TEST NUMBER: P333402-830

CATALOG NUMBER: S125DIW-S850D470U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	255.2	258.8	262.5	264.9	266.4	267.8	269.1	270.5
115°	283.1	286.7	290.2	292.4	293.1	293.9	294.6	295.3
117.5°	309.6	312.8	316.0	318.3	319.5	320.7	322.0	323.2
120°	326.9	330.4	333.9	336.1	336.9	337.7	338.6	339.4
122.5°	342.9	346.2	349.5	351.6	352.3	353.1	353.8	354.6
125°	366.5	369.6	372.6	374.6	375.4	376.2	377.0	377.8
127.5°	387.3	390.3	393.3	395.1	395.7	396.2	396.8	397.4
130°	401.5	404.3	407.1	408.8	409.3	410.0	410.6	411.2
132.5°	414.2	417.2	420.2	421.9	422.4	422.8	423.2	423.7
135°	432.3	434.9	437.5	439.1	439.6	440.2	440.6	441.2
137.5°	449.8	452.4	455.1	456.5	456.9	457.2	457.6	458.0
140°	460.4	463.0	465.5	467.0	467.3	467.6	467.9	468.2
142.5°	471.1	473.3	475.3	476.5	476.7	477.1	477.4	477.7
145°	487.2	488.3	489.6	490.3	490.6	490.9	491.2	491.5
147.5°	501.4	501.9	502.4	502.5	502.2	501.9	501.5	501.2
150°	510.8	511.0	511.1	511.0	510.5	509.9	509.3	508.8
152.5°	519.6	519.8	520.0	519.8	519.2	518.5	517.9	517.3
155°	531.9	532.2	532.4	532.2	531.4	530.7	529.9	529.1
157.5°	542.0	542.2	542.5	542.3	541.6	540.8	540.1	539.3
160°	548.3	548.7	549.0	548.8	548.1	547.3	546.6	545.8
162.5°	554.0	554.6	555.1	555.0	554.1	553.3	552.4	551.6
165°	561.5	562.0	562.6	562.5	561.8	560.9	560.2	559.4
167.5°	567.0	567.7	568.4	568.4	567.4	566.6	565.7	564.9
170°	569.9	570.7	571.5	571.4	570.5	569.7	568.8	568.0
172.5°	572.1	572.8	573.5	573.4	572.6	571.7	570.9	570.0
175°	574.6	575.3	576.1	576.1	575.2	574.4	573.5	572.7
177.5°	575.6	576.1	576.6	576.6	576.0	575.4	574.8	574.2
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2

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