

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: P331470

Luminaire Tested: **S122DIW-S290D435U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331470
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S290D435U835-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2705.3 lumens
Efficiency: N/A
Efficacy: 117.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

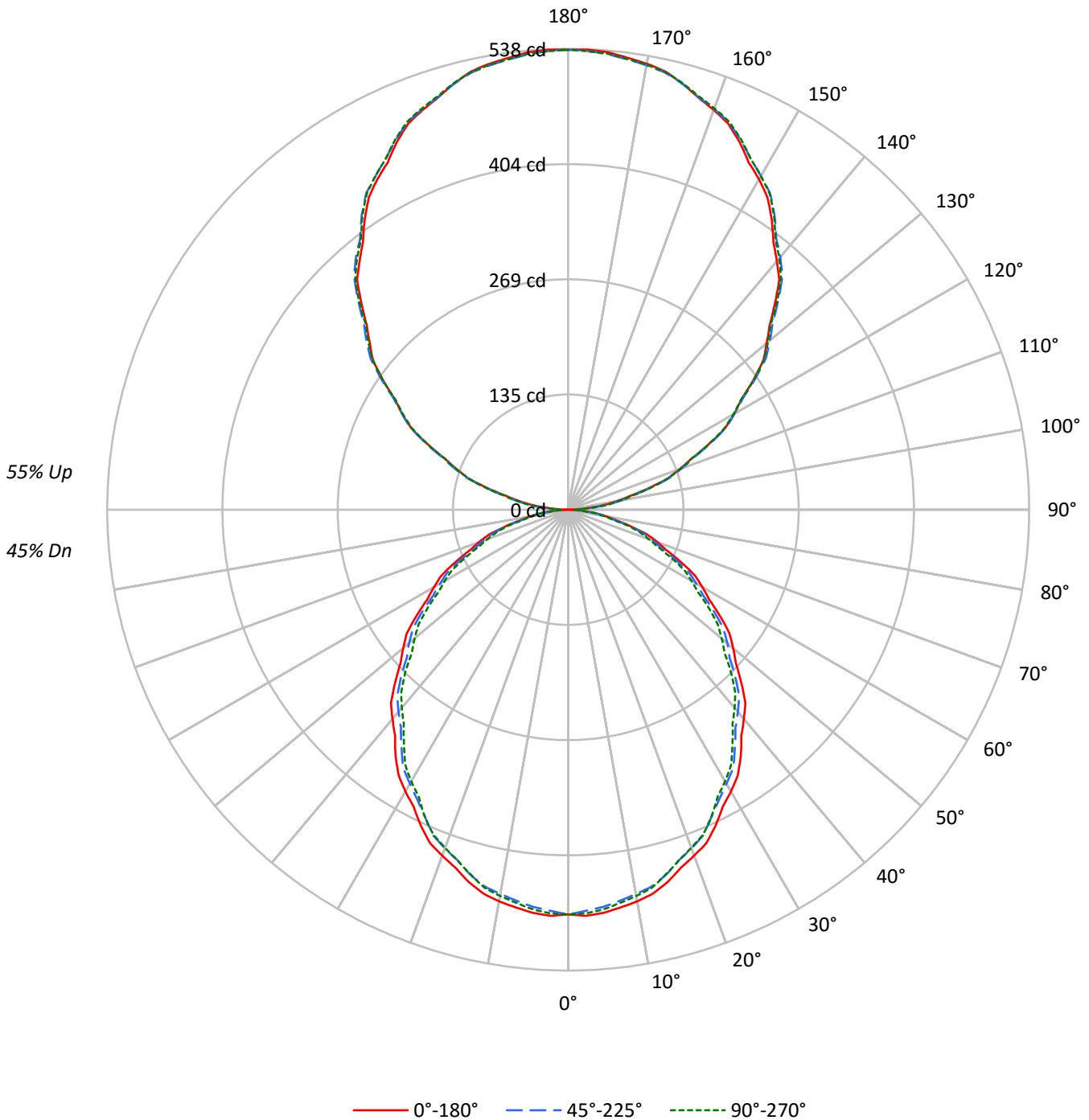
Input Watts (W): 23
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331470

CATALOG NUMBER: S122DIW-S290D435U835-4F0-1E-UDD-F1

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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	37
2	88	81	74	69	80	74	69	64	62	58	54	50	48	45	40	38	36	31
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	33	31	27
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	31	29	27	23
5	67	56	48	42	61	51	44	39	43	38	34	35	31	28	28	25	23	20
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14
9	49	37	30	25	45	35	28	23	29	24	20	24	20	18	20	17	15	12
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7627	7627	7627
5°	7656	7546	7592
10°	7612	7470	7507
15°	7517	7373	7366
20°	7383	7228	7220
25°	7251	7049	7049
30°	7081	6885	6825
35°	6922	6688	6589
40°	6721	6492	6367
45°	6524	6295	6140
50°	6310	6094	5878
55°	6086	5858	5638
60°	5838	5574	5370
65°	5570	5295	5051
70°	5231	4952	4716
75°	4760	4560	4448
80°	4221	4100	3887
85°	3446	3279	2946



TEST NUMBER: P331470

CATALOG NUMBER: S122DIW-S290D435U835-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.4	1.6
10°-20°	125.0	4.6
20°-30°	183.7	6.8
30°-40°	213.4	7.9
40°-50°	213.2	7.9
50°-60°	185.9	6.9
60°-70°	137.5	5.1
70°-80°	77.9	2.9
80°-90°	23.1	0.9
90°-100°	34.0	1.3
100°-110°	105.7	3.9
110°-120°	180.6	6.7
120°-130°	237.5	8.8
130°-140°	266.6	9.9
140°-150°	261.4	9.7
150°-160°	219.2	8.1
160°-170°	145.4	5.4
170°-180°	50.8	1.9
0°-30°	353.2	13.1
0°-40°	566.6	20.9
0°-60°	965.7	35.7
0°-90°	1204.1	44.5
90°-120°	320.3	11.8
90°-150°	1085.7	40.1
90°-180°	1501.0	55.5
0°-180°	2705.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	472	472	472	472	472	
5°	472	470	466	469	468	45
15°	450	447	441	443	441	127
25°	407	403	396	396	396	187
35°	351	346	339	337	334	219
45°	286	282	276	271	269	220
55°	216	213	208	203	200	193
65°	146	143	139	135	132	144
75°	76	75	73	71	71	82
85°	19	18	18	16	16	21
90°	0	6	16	15	15	2
95°	24	28	29	29	28	27
105°	97	99	100	101	101	103
115°	181	184	183	182	181	179
125°	264	267	266	265	265	236
135°	341	346	347	346	345	263
145°	414	417	420	420	419	259
155°	473	475	476	478	477	218
165°	515	515	515	518	516	145
175°	536	535	534	537	534	51
180°	537	537	537	537	537	



TEST NUMBER: P331470

CATALOG NUMBER: S122DIW-S290D435U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4
2.5°	474.6	474.2	473.8	473.4	473.0	472.4	471.5	470.6	469.7	468.8	469.6
5°	472.4	472.0	471.6	471.2	470.8	470.1	469.0	467.9	466.7	465.6	466.4
7.5°	468.3	467.6	467.0	466.4	465.8	464.9	463.8	462.6	461.5	460.4	461.2
10°	464.3	463.6	462.9	462.2	461.4	460.5	459.3	458.1	456.9	455.6	456.4
12.5°	458.8	458.2	457.6	456.9	456.3	455.4	454.2	453.0	451.8	450.6	451.1
15°	449.7	449.1	448.5	447.9	447.3	446.4	445.0	443.7	442.4	441.1	441.5
17.5°	438.1	437.5	436.9	436.3	435.7	434.7	433.4	432.0	430.7	429.4	429.8
20°	429.7	429.1	428.5	427.9	427.3	426.3	424.9	423.5	422.1	420.7	421.0
22.5°	421.4	420.5	419.7	418.8	418.0	416.9	415.6	414.2	412.9	411.6	411.6
25°	407.0	406.2	405.4	404.6	403.8	402.5	400.8	399.1	397.4	395.7	395.9
27.5°	390.7	390.0	389.2	388.5	387.8	386.7	385.4	384.0	382.7	381.3	381.0
30°	379.8	379.0	378.2	377.4	376.5	375.4	373.9	372.4	370.8	369.3	369.0
32.5°	368.1	367.5	366.9	366.2	365.6	364.4	362.8	361.3	359.7	358.1	357.5
35°	351.2	350.1	349.1	348.1	347.1	345.8	344.2	342.6	341.0	339.3	338.7
37.5°	332.0	331.1	330.2	329.3	328.4	327.2	325.6	324.0	322.3	320.7	320.0
40°	318.9	318.1	317.3	316.5	315.7	314.5	312.8	311.2	309.6	308.0	307.1
42.5°	306.2	305.4	304.6	303.8	303.0	301.7	300.1	298.5	296.9	295.3	294.3
45°	285.7	285.0	284.3	283.6	282.9	281.8	280.3	278.8	277.3	275.7	274.6
47.5°	265.4	264.7	264.1	263.4	262.7	261.6	260.0	258.5	256.9	255.3	254.1
50°	251.2	250.7	250.2	249.7	249.2	248.2	246.8	245.4	244.0	242.6	241.2
52.5°	237.4	236.7	236.1	235.4	234.7	233.7	232.4	231.1	229.7	228.4	227.2
55°	216.2	215.6	215.0	214.4	213.8	212.9	211.7	210.5	209.3	208.1	206.8
57.5°	195.0	194.5	194.0	193.5	193.0	192.1	190.8	189.5	188.1	186.8	185.6
60°	180.8	180.4	180.0	179.6	179.2	178.3	176.9	175.5	174.0	172.6	171.5
62.5°	167.0	166.3	165.7	165.1	164.4	163.5	162.4	161.4	160.3	159.2	158.1
65°	145.8	145.2	144.6	144.0	143.4	142.6	141.6	140.6	139.6	138.6	137.6
67.5°	124.3	123.8	123.3	122.8	122.4	121.7	120.7	119.8	118.9	118.0	117.3
70°	110.8	110.4	110.0	109.6	109.2	108.6	107.7	106.8	105.8	104.9	104.2
72.5°	97.0	96.6	96.2	95.8	95.4	94.9	94.3	93.8	93.2	92.6	91.9
75°	76.3	76.1	75.9	75.7	75.5	75.2	74.7	74.1	73.6	73.1	72.5
77.5°	57.8	57.4	57.1	56.8	56.4	56.1	55.9	55.7	55.5	55.3	55.0
80°	45.4	45.3	45.2	45.1	45.0	44.9	44.7	44.5	44.3	44.1	43.8
82.5°	33.8	33.8	33.8	33.7	33.7	33.6	33.5	33.4	33.3	33.2	32.8
85°	18.6	18.5	18.4	18.3	18.2	18.1	18.0	17.9	17.8	17.7	17.4
87.5°	6.6	6.7	6.8	6.9	7.0	7.1	7.4	7.7	8.0	8.3	8.0
90°	0.5	1.7	2.9	4.1	5.3	7.0	9.2	11.4	13.6	15.9	15.7
92.5°	8.1	9.0	9.8	10.7	11.6	12.3	12.8	13.4	13.9	14.4	14.4
95°	23.6	24.6	25.6	26.6	27.6	28.2	28.4	28.6	28.8	29.0	29.0
97.5°	43.0	43.9	44.8	45.7	46.6	47.2	47.6	48.0	48.4	48.7	48.7
100°	57.5	58.3	59.1	60.0	60.8	61.3	61.6	61.9	62.2	62.5	62.5
102.5°	72.8	73.4	74.0	74.7	75.3	75.9	76.2	76.6	77.0	77.4	77.5
105°	97.4	97.7	98.0	98.3	98.6	98.9	99.1	99.3	99.5	99.7	99.9
107.5°	122.2	122.7	123.1	123.6	124.0	124.2	124.2	124.2	124.2	124.2	124.3
110°	138.2	138.8	139.4	140.0	140.6	140.9	140.9	140.9	140.9	140.9	140.9



TEST NUMBER: P331470

CATALOG NUMBER: S122DIW-S290D435U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	155.6	156.2	156.8	157.4	158.0	158.3	158.2	158.1	158.0	157.9	157.7
115°	181.2	181.8	182.4	183.0	183.6	183.8	183.6	183.4	183.2	183.0	182.9
117.5°	206.8	207.6	208.4	209.2	210.0	210.1	209.6	209.0	208.4	207.9	207.6
120°	223.8	224.6	225.4	226.2	227.0	227.0	226.2	225.4	224.6	223.8	223.8
122.5°	239.4	240.4	241.3	242.3	243.3	243.5	242.9	242.3	241.8	241.2	241.0
125°	263.7	264.6	265.5	266.4	267.3	267.6	267.3	267.0	266.7	266.4	266.1
127.5°	287.3	288.5	289.6	290.8	291.9	292.3	292.0	291.6	291.2	290.9	290.5
130°	302.2	303.5	304.8	306.1	307.4	308.0	307.8	307.6	307.4	307.2	307.0
132.5°	318.9	319.9	321.0	322.1	323.1	323.7	323.7	323.8	323.8	323.8	323.4
135°	341.2	342.3	343.4	344.5	345.6	346.2	346.4	346.6	346.8	347.0	346.9
137.5°	364.6	365.5	366.4	367.3	368.2	368.8	369.1	369.4	369.6	369.9	369.8
140°	378.8	379.7	380.6	381.5	382.4	383.1	383.6	384.1	384.6	385.1	385.1
142.5°	393.3	394.2	395.1	396.0	396.9	397.5	397.8	398.2	398.5	398.9	399.0
145°	414.1	414.8	415.5	416.2	416.9	417.6	418.2	418.8	419.4	420.0	420.1
147.5°	432.7	433.5	434.4	435.2	436.1	436.7	437.1	437.5	437.9	438.3	438.5
150°	445.4	446.0	446.6	447.2	447.8	448.3	448.7	449.1	449.5	449.9	450.2
152.5°	456.6	457.2	457.8	458.4	459.0	459.6	460.0	460.5	461.0	461.5	461.9
155°	473.4	473.7	474.0	474.4	474.7	475.0	475.3	475.6	475.9	476.2	476.7
157.5°	487.9	488.1	488.3	488.5	488.7	488.8	489.0	489.2	489.4	489.6	490.3
160°	496.6	496.8	497.0	497.2	497.4	497.5	497.6	497.7	497.8	497.9	498.5
162.5°	504.5	504.6	504.6	504.6	504.7	504.8	504.9	505.0	505.1	505.2	505.8
165°	515.1	515.0	514.9	514.8	514.7	514.7	514.7	514.7	514.7	514.7	515.4
167.5°	524.0	523.7	523.4	523.1	522.8	522.6	522.6	522.6	522.6	522.6	523.3
170°	528.7	528.4	528.1	527.8	527.5	527.3	527.2	527.1	527.0	526.9	527.6
172.5°	532.0	531.7	531.4	531.1	530.8	530.6	530.5	530.4	530.3	530.2	530.9
175°	536.0	535.7	535.4	535.1	534.8	534.5	534.3	534.1	533.9	533.7	534.4
177.5°	537.6	537.4	537.1	536.9	536.6	536.4	536.3	536.1	535.9	535.8	536.3
180°	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9



TEST NUMBER: P331470

CATALOG NUMBER: S122DIW-S290D435U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4
2.5°	470.4	471.2	472.0	472.4	472.2	472.0	471.9	471.7
5°	467.3	468.1	468.9	469.2	469.0	468.8	468.6	468.4
7.5°	462.0	462.8	463.6	463.9	463.7	463.4	463.2	463.0
10°	457.3	458.1	458.9	459.1	458.8	458.5	458.2	457.9
12.5°	451.7	452.2	452.8	453.0	452.8	452.5	452.3	452.1
15°	441.9	442.3	442.7	442.7	442.2	441.7	441.2	440.7
17.5°	430.3	430.8	431.2	431.2	430.7	430.3	429.8	429.3
20°	421.3	421.6	421.9	421.8	421.4	421.0	420.6	420.2
22.5°	411.7	411.8	411.8	411.7	411.5	411.2	411.0	410.8
25°	396.1	396.3	396.5	396.5	396.3	396.1	395.9	395.7
27.5°	380.7	380.4	380.1	379.7	379.2	378.7	378.3	377.8
30°	368.7	368.4	368.1	367.8	367.4	367.0	366.6	366.1
32.5°	357.0	356.4	355.9	355.4	355.0	354.6	354.2	353.8
35°	338.1	337.5	336.9	336.4	335.9	335.4	334.9	334.3
37.5°	319.2	318.5	317.7	317.1	316.6	316.1	315.7	315.2
40°	306.2	305.3	304.4	303.7	303.3	302.9	302.5	302.1
42.5°	293.3	292.3	291.3	290.5	290.0	289.4	288.9	288.3
45°	273.5	272.4	271.3	270.5	270.1	269.7	269.3	268.9
47.5°	253.0	251.8	250.6	249.7	249.2	248.6	248.0	247.4
50°	239.8	238.3	236.9	236.0	235.5	235.0	234.5	234.0
52.5°	226.1	224.9	223.7	222.8	222.1	221.5	220.8	220.1
55°	205.6	204.4	203.2	202.4	201.9	201.3	200.8	200.3
57.5°	184.4	183.2	182.0	181.2	180.9	180.5	180.1	179.7
60°	170.4	169.3	168.2	167.5	167.2	166.9	166.6	166.3
62.5°	157.1	156.1	155.1	154.4	154.0	153.6	153.2	152.8
65°	136.7	135.8	134.9	134.2	133.7	133.2	132.7	132.2
67.5°	116.6	115.9	115.2	114.6	114.2	113.8	113.4	113.0
70°	103.5	102.8	102.1	101.6	101.2	100.7	100.3	99.9
72.5°	91.2	90.5	89.8	89.2	88.9	88.6	88.3	87.9
75°	71.9	71.3	70.7	70.5	70.7	70.9	71.1	71.3
77.5°	54.7	54.4	54.1	53.8	53.5	53.3	53.0	52.7
80°	43.5	43.2	42.9	42.6	42.4	42.2	42.0	41.8
82.5°	32.4	32.0	31.6	31.4	31.4	31.3	31.3	31.3
85°	17.1	16.8	16.5	16.3	16.2	16.1	16.0	15.9
87.5°	7.7	7.4	7.1	7.0	6.9	6.8	6.8	6.7
90°	15.5	15.3	15.1	15.0	15.1	15.2	15.3	15.4
92.5°	14.5	14.5	14.6	14.6	14.6	14.6	14.7	14.7
95°	29.0	29.0	29.0	28.9	28.7	28.5	28.3	28.1
97.5°	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
100°	62.5	62.5	62.5	62.5	62.4	62.3	62.2	62.1
102.5°	77.5	77.6	77.7	77.7	77.6	77.5	77.4	77.3
105°	100.1	100.3	100.5	100.6	100.6	100.6	100.6	100.6
107.5°	124.4	124.5	124.6	124.4	123.9	123.4	123.0	122.5
110°	140.9	140.9	140.9	140.7	140.4	140.1	139.8	139.5



TEST NUMBER: P331470

CATALOG NUMBER: S122DIW-S290D435U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	157.5	157.2	157.0	156.7	156.5	156.3	156.1	155.9
115°	182.8	182.7	182.6	182.4	182.1	181.8	181.5	181.2
117.5°	207.4	207.1	206.9	206.6	206.3	206.0	205.7	205.4
120°	223.8	223.8	223.8	223.7	223.4	223.1	222.8	222.5
122.5°	240.7	240.5	240.2	240.0	239.8	239.6	239.3	239.1
125°	265.8	265.5	265.2	265.0	264.9	264.8	264.7	264.6
127.5°	290.1	289.8	289.4	289.1	288.7	288.4	288.1	287.8
130°	306.8	306.6	306.4	306.1	305.7	305.3	304.9	304.5
132.5°	323.0	322.5	322.1	321.7	321.4	321.0	320.7	320.4
135°	346.8	346.7	346.6	346.4	346.1	345.8	345.5	345.2
137.5°	369.7	369.6	369.6	369.3	368.9	368.5	368.1	367.7
140°	385.1	385.1	385.1	384.9	384.5	384.1	383.7	383.3
142.5°	399.0	399.1	399.2	399.0	398.6	398.2	397.8	397.4
145°	420.2	420.3	420.4	420.2	419.8	419.4	419.0	418.6
147.5°	438.7	439.0	439.2	439.1	438.7	438.3	437.9	437.6
150°	450.5	450.8	451.1	451.1	450.8	450.5	450.2	449.9
152.5°	462.2	462.6	463.0	463.0	462.6	462.2	461.9	461.5
155°	477.2	477.7	478.2	478.3	478.0	477.7	477.4	477.1
157.5°	490.9	491.6	492.3	492.4	491.9	491.4	491.0	490.5
160°	499.1	499.7	500.3	500.4	500.0	499.6	499.2	498.8
162.5°	506.5	507.2	507.9	508.0	507.5	507.0	506.5	506.1
165°	516.1	516.8	517.5	517.6	517.1	516.6	516.1	515.6
167.5°	524.0	524.7	525.4	525.5	524.9	524.4	523.9	523.4
170°	528.3	529.0	529.7	529.8	529.2	528.6	528.0	527.4
172.5°	531.6	532.3	533.0	533.0	532.4	531.8	531.2	530.6
175°	535.1	535.8	536.5	536.6	536.0	535.4	534.8	534.2
177.5°	536.8	537.2	537.7	537.7	537.2	536.8	536.3	535.8
180°	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9

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