

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: P331558

Luminaire Tested: **S122DIW-S865D435U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331558
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-S865D435U835-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP 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: 4996.4 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

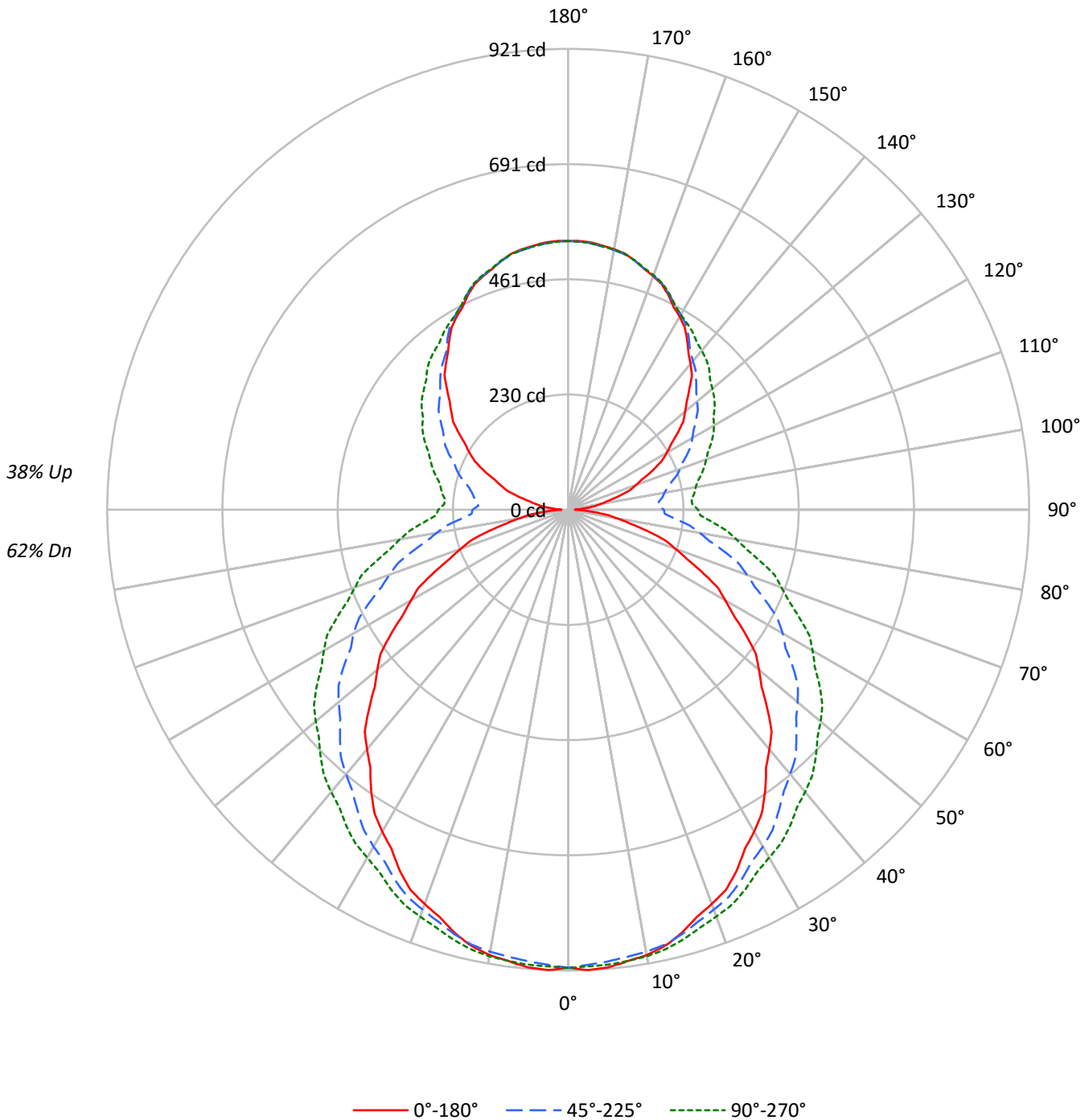
Input Watts (W): 46.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331558

CATALOG NUMBER: S122DIW-S865D435U835-4F0-1E-UDD-D1

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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	99	93	89	85	92	87	83	80	76	73	70	66	64	61	57	55	53	48
2	89	81	73	68	83	75	69	64	66	61	57	57	53	50	49	46	43	39
3	81	70	62	55	75	66	58	53	57	52	47	50	45	41	43	39	36	32
4	74	62	53	46	68	58	50	44	51	44	39	44	39	35	38	34	31	27
5	68	55	46	40	63	52	44	38	45	39	34	39	34	30	34	30	26	23
6	62	49	40	34	58	46	38	32	41	34	29	35	30	26	30	26	23	20
7	57	44	36	30	53	42	34	28	37	30	26	32	27	23	28	24	20	18
8	53	40	32	26	50	38	30	25	33	27	23	29	24	20	25	21	18	16
9	50	37	29	23	46	35	27	22	31	25	20	27	22	18	23	19	16	14
10	46	34	26	21	43	32	25	20	28	22	18	25	20	16	22	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14783	14783	14783
5°	14855	14230	14176
10°	14762	13809	13655
15°	14558	13364	13106
20°	14300	12888	12577
25°	14048	12428	12096
30°	13689	11955	11614
35°	13327	11498	11275
40°	12947	11110	10935
45°	12584	10762	10645
50°	12196	10448	10360
55°	11790	10109	10067
60°	11292	9759	9760
65°	10774	9347	9393
70°	10189	8905	8999
75°	9446	8470	8637
80°	8274	8029	8266
85°	7152	7646	7981



TEST NUMBER: P331558

CATALOG NUMBER: S122DIW-S865D435U835-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.8	1.7
10°-20°	248.8	5.0
20°-30°	377.0	7.5
30°-40°	459.2	9.2
40°-50°	494.0	9.9
50°-60°	479.7	9.6
60°-70°	418.9	8.4
70°-80°	322.5	6.5
80°-90°	218.6	4.4
90°-100°	183.1	3.7
100°-110°	214.5	4.3
110°-120°	252.5	5.1
120°-130°	277.6	5.6
130°-140°	283.4	5.7
140°-150°	264.3	5.3
150°-160°	219.2	4.4
160°-170°	145.4	2.9
170°-180°	50.8	1.0
0°-30°	712.5	14.3
0°-40°	1171.7	23.5
0°-60°	2145.5	42.9
0°-90°	3105.4	62.2
90°-120°	650.2	13.0
90°-150°	1475.5	29.5
90°-180°	1891.0	37.8
0°-180°	4996.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	918	914	906	914	913	87
15°	876	878	878	890	889	247
25°	796	806	817	833	837	366
35°	686	709	734	762	772	429
45°	563	599	645	684	699	434
55°	431	480	548	594	613	385
65°	295	360	438	490	510	293
75°	163	238	322	377	397	173
85°	48	130	215	269	289	51
90°	14	97	191	241	260	10
95°	34	102	182	230	247	35
105°	104	146	214	259	276	110
115°	186	206	263	301	315	184
125°	266	272	312	345	358	238
135°	342	348	362	388	398	265
145°	414	417	420	428	433	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: P331558

CATALOG NUMBER: S122DIW-S865D435U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	920.9	920.2	919.5	918.8	918.1	916.9	915.2	913.6	911.9	910.3	911.5
5°	918.2	917.4	916.5	915.6	914.7	913.4	911.6	909.8	908.1	906.3	908.1
7.5°	910.0	909.4	908.8	908.3	907.7	906.7	905.3	904.0	902.6	901.3	903.4
10°	903.7	903.1	902.5	901.9	901.3	900.6	899.7	898.8	897.9	897.0	899.4
12.5°	893.0	893.2	893.3	893.4	893.5	893.2	892.6	891.9	891.3	890.6	893.0
15°	875.8	876.4	877.0	877.6	878.1	878.4	878.4	878.4	878.4	878.4	881.1
17.5°	853.5	854.7	856.0	857.2	858.4	859.5	860.5	861.4	862.4	863.3	866.1
20°	838.6	840.1	841.6	843.1	844.5	845.9	847.0	848.2	849.4	850.6	853.8
22.5°	822.7	824.4	826.1	827.8	829.5	831.2	832.9	834.5	836.2	837.8	841.1
25°	796.2	798.2	800.3	802.4	804.4	806.8	809.4	812.1	814.7	817.4	820.9
27.5°	764.3	767.7	771.0	774.4	777.8	781.0	784.1	787.3	790.4	793.5	798.0
30°	743.1	746.9	750.8	754.6	758.4	762.3	766.1	769.9	773.8	777.6	782.3
32.5°	719.7	724.0	728.3	732.7	737.0	741.4	745.9	750.5	755.0	759.5	765.0
35°	686.0	691.0	696.1	701.1	706.1	711.4	717.0	722.6	728.2	733.8	740.3
37.5°	649.4	655.2	661.0	666.7	672.5	679.0	686.3	693.6	700.8	708.1	715.3
40°	625.0	631.5	638.0	644.5	650.9	658.2	666.1	674.1	682.1	690.0	697.7
42.5°	601.6	608.1	614.6	621.1	627.6	635.4	644.5	653.7	662.8	672.0	680.3
45°	562.6	570.6	578.5	586.5	594.5	603.6	613.9	624.3	634.6	644.9	654.0
47.5°	524.1	532.8	541.5	550.2	558.8	569.2	581.3	593.4	605.5	617.6	627.1
50°	497.6	506.7	515.9	525.0	534.2	545.4	558.6	571.9	585.2	598.5	608.5
52.5°	472.1	481.7	491.4	501.0	510.6	522.4	536.4	550.3	564.3	578.3	588.5
55°	431.3	441.9	452.5	463.1	473.7	486.7	502.0	517.4	532.7	548.0	558.6
57.5°	390.9	402.9	414.9	426.8	438.8	452.6	468.2	483.9	499.5	515.1	526.6
60°	362.3	374.9	387.6	400.3	413.0	427.7	444.5	461.3	478.1	495.0	506.2
62.5°	336.8	349.9	363.1	376.2	389.4	404.4	421.2	438.0	454.8	471.6	483.5
65°	294.6	309.0	323.5	337.9	352.4	368.3	385.7	403.1	420.5	437.9	450.0
67.5°	255.8	270.9	286.0	301.1	316.2	332.7	350.5	368.3	386.1	403.9	416.1
70°	228.2	243.6	258.9	274.2	289.6	306.4	324.7	342.9	361.2	379.5	392.2
72.5°	202.8	218.6	234.4	250.2	266.0	283.1	301.7	320.2	338.7	357.2	369.7
75°	163.2	179.7	196.2	212.8	229.3	247.0	265.8	284.7	303.6	322.4	335.1
77.5°	125.0	142.3	159.6	176.8	194.1	212.3	231.5	250.7	269.8	289.0	301.6
80°	99.5	117.5	135.5	153.5	171.5	190.0	209.2	228.4	247.5	266.7	279.1
82.5°	78.3	96.0	113.8	131.5	149.3	167.9	187.3	206.7	226.1	245.5	257.9
85°	47.8	66.1	84.3	102.6	120.9	139.5	158.3	177.2	196.1	215.0	227.4
87.5°	26.1	43.9	61.7	79.5	97.4	115.9	135.2	154.6	173.9	193.2	205.2
90°	13.7	32.0	50.3	68.7	87.0	106.7	127.8	148.8	169.9	191.0	202.6
92.5°	20.3	37.1	53.9	70.7	87.5	105.3	123.9	142.6	161.3	180.0	191.6
95°	34.2	49.0	63.9	78.8	93.6	110.0	127.9	145.8	163.7	181.6	192.8
97.5°	52.3	65.5	78.8	92.0	105.2	120.5	137.8	155.2	172.6	189.9	200.8
100°	66.8	78.5	90.3	102.0	113.7	128.0	144.8	161.6	178.4	195.2	206.1
102.5°	81.0	91.6	102.2	112.8	123.4	137.0	153.4	169.8	186.2	202.6	213.4
105°	104.0	112.9	121.7	130.6	139.5	151.7	167.2	182.7	198.3	213.8	224.3
107.5°	128.6	135.9	143.2	150.5	157.7	168.7	183.4	198.1	212.8	227.5	237.5
110°	143.5	150.0	156.5	163.0	169.5	180.0	194.4	208.9	223.3	237.8	247.2



TEST NUMBER: P331558

CATALOG NUMBER: S122DIW-S865D435U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	160.9	166.4	172.0	177.6	183.1	192.7	206.4	220.1	233.7	247.4	256.6
115°	186.5	190.4	194.2	198.1	201.9	210.4	223.4	236.5	249.6	262.7	271.4
117.5°	210.8	213.7	216.6	219.5	222.5	229.8	241.5	253.2	264.9	276.6	285.1
120°	227.8	229.8	231.8	233.7	235.7	242.2	253.2	264.2	275.2	286.2	294.4
122.5°	243.4	244.8	246.3	247.7	249.1	255.1	265.6	276.2	286.7	297.2	305.0
125°	266.3	267.2	268.1	269.1	270.0	275.0	284.1	293.2	302.4	311.5	319.2
127.5°	290.0	290.8	291.7	292.5	293.4	297.4	304.7	311.9	319.2	326.4	333.4
130°	304.8	305.9	306.9	307.9	308.9	312.4	318.4	324.4	330.4	336.4	343.2
132.5°	321.5	322.3	323.1	323.8	324.6	327.4	332.2	337.0	341.9	346.7	353.1
135°	342.5	343.6	344.7	345.8	346.9	349.0	352.2	355.3	358.5	361.6	367.7
137.5°	365.9	366.8	367.6	368.5	369.3	370.5	372.1	373.7	375.2	376.8	382.1
140°	380.1	380.7	381.3	381.9	382.5	383.4	384.5	385.6	386.7	387.8	392.5
142.5°	394.6	395.2	395.8	396.4	397.0	397.6	398.0	398.5	398.9	399.4	403.3
145°	414.1	414.8	415.5	416.2	416.9	417.6	418.2	418.8	419.4	420.0	421.9
147.5°	432.7	433.5	434.4	435.2	436.1	436.7	437.1	437.5	437.9	438.3	438.7
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: P331558

CATALOG NUMBER: S122DIW-S865D435U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	912.6	913.8	915.0	915.4	914.9	914.4	913.9	913.5
5°	909.8	911.6	913.4	914.1	913.8	913.5	913.2	912.9
7.5°	905.5	907.6	909.8	910.7	910.4	910.1	909.8	909.5
10°	901.7	904.1	906.5	907.5	907.2	906.9	906.6	906.3
12.5°	895.4	897.7	900.1	901.1	900.8	900.5	900.2	899.9
15°	883.7	886.4	889.1	890.2	889.9	889.6	889.3	889.1
17.5°	868.9	871.6	874.4	875.8	875.8	875.8	875.8	875.8
20°	857.1	860.3	863.5	865.2	865.2	865.2	865.2	865.2
22.5°	844.3	847.6	850.8	852.7	853.1	853.6	854.1	854.6
25°	824.5	828.0	831.6	833.8	834.6	835.5	836.4	837.3
27.5°	802.5	807.0	811.4	814.0	814.7	815.3	816.0	816.6
30°	787.0	791.7	796.5	799.3	800.1	801.0	801.9	802.8
32.5°	770.4	775.8	781.2	784.8	786.3	787.9	789.5	791.1
35°	746.8	753.3	759.8	764.0	766.1	768.2	770.2	772.3
37.5°	722.4	729.6	736.8	741.5	743.7	745.9	748.1	750.3
40°	705.3	713.0	720.7	725.8	728.5	731.1	733.8	736.5
42.5°	688.7	697.1	705.5	711.0	713.6	716.3	718.9	721.6
45°	663.2	672.3	681.5	687.5	690.5	693.4	696.4	699.3
47.5°	636.7	646.2	655.8	662.2	665.4	668.7	671.9	675.2
50°	618.5	628.5	638.6	645.2	648.4	651.7	654.9	658.2
52.5°	598.8	609.1	619.3	626.2	629.7	633.2	636.6	640.1
55°	569.3	579.9	590.5	597.7	601.5	605.4	609.2	613.0
57.5°	538.0	549.4	560.9	568.6	572.4	576.3	580.2	584.1
60°	517.4	528.6	539.8	547.4	551.6	555.7	559.8	564.0
62.5°	495.4	507.3	519.2	527.2	531.0	534.9	538.8	542.7
65°	462.1	474.2	486.3	494.2	498.0	501.9	505.7	509.5
67.5°	428.3	440.5	452.8	460.9	464.9	468.9	472.9	476.9
70°	404.9	417.5	430.2	438.3	441.9	445.4	449.0	452.5
72.5°	382.1	394.5	407.0	415.3	419.6	423.8	428.1	432.3
75°	347.8	360.5	373.2	381.4	385.3	389.1	392.9	396.8
77.5°	314.3	326.9	339.5	347.9	352.0	356.1	360.3	364.4
80°	291.5	303.9	316.3	324.5	328.6	332.8	336.9	341.0
82.5°	270.3	282.6	295.0	303.2	307.1	310.9	314.8	318.7
85°	239.7	252.1	264.5	272.8	276.9	281.0	285.1	289.3
87.5°	217.2	229.2	241.2	249.0	252.8	256.6	260.4	264.2
90°	214.2	225.8	237.4	245.0	248.6	252.3	255.9	259.6
92.5°	203.2	214.8	226.4	234.0	237.5	241.1	244.7	248.2
95°	204.0	215.2	226.4	233.7	237.0	240.4	243.7	247.0
97.5°	211.8	222.7	233.6	240.8	244.2	247.7	251.1	254.6
100°	217.0	227.9	238.9	245.9	249.0	252.2	255.3	258.5
102.5°	224.2	234.9	245.7	252.6	255.8	258.9	262.0	265.2
105°	234.8	245.4	255.9	262.8	266.0	269.2	272.5	275.7
107.5°	247.4	257.4	267.4	273.8	276.6	279.4	282.1	284.9
110°	256.6	266.1	275.5	281.7	284.6	287.6	290.5	293.5



TEST NUMBER: P331558

CATALOG NUMBER: S122DIW-S865D435U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	265.8	275.0	284.1	290.3	293.3	296.3	299.3	302.3
115°	280.1	288.9	297.6	303.5	306.4	309.4	312.3	315.2
117.5°	293.6	302.1	310.5	316.1	318.8	321.6	324.3	327.0
120°	302.7	310.9	319.2	324.8	327.7	330.7	333.6	336.6
122.5°	312.8	320.5	328.3	333.5	336.0	338.6	341.1	343.7
125°	326.8	334.5	342.2	347.3	349.8	352.4	354.9	357.5
127.5°	340.3	347.3	354.2	358.8	361.1	363.4	365.7	367.9
130°	350.1	357.0	363.9	368.3	370.2	372.2	374.2	376.1
132.5°	359.5	365.9	372.3	376.5	378.5	380.6	382.6	384.6
135°	373.8	379.9	386.0	390.1	392.1	394.2	396.3	398.3
137.5°	387.5	392.8	398.2	401.6	403.2	404.8	406.4	408.0
140°	397.2	401.9	406.6	409.7	411.0	412.4	413.8	415.1
142.5°	407.1	411.0	414.8	417.3	418.4	419.6	420.7	421.8
145°	423.7	425.6	427.5	428.9	430.0	431.1	432.1	433.2
147.5°	439.2	439.7	440.1	440.5	440.8	441.2	441.5	441.8
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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