

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: P332495

Luminaire Tested: **SA4XXDIP-C350D365U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332495
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C350D365U835-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

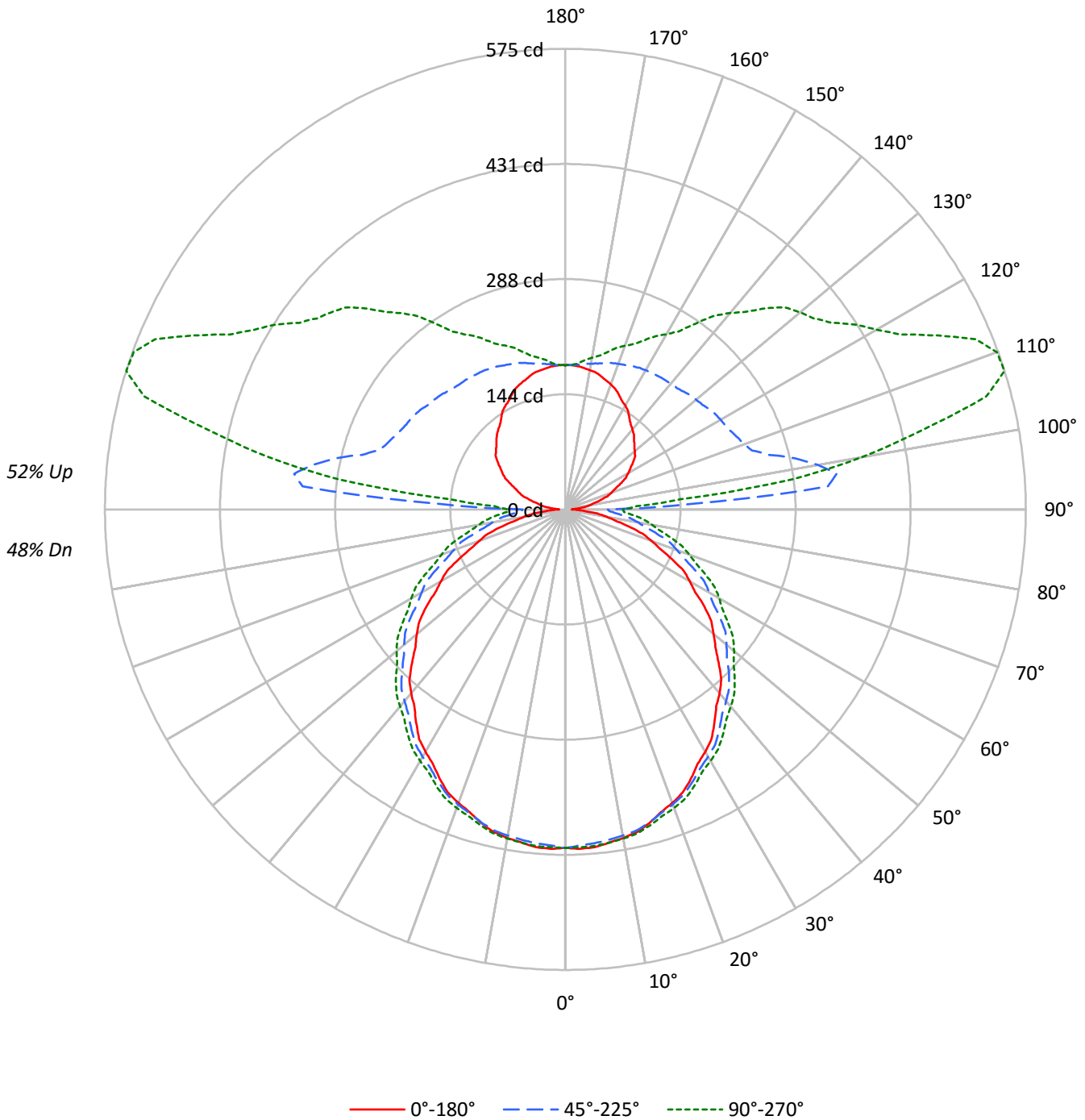
Lumens per Lamp: N/A
Luminaire Lumens: 2750.2 lumens
Efficiency: N/A
Efficacy: 135.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 20.3
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





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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	82	82	82	68	68	68	55	55	55	48
1	96	92	87	84	89	84	81	77	71	68	66	58	56	55	47	45	44	39
2	87	79	73	67	80	73	68	63	61	57	54	51	48	45	41	38	36	32
3	79	70	62	56	73	64	57	52	54	49	45	44	41	37	36	33	31	26
4	73	61	53	47	66	57	49	44	48	42	38	39	35	32	32	29	26	22
5	66	54	46	40	61	50	43	37	42	37	32	35	31	27	28	25	22	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17
7	56	44	36	30	52	41	33	28	34	29	24	29	24	21	23	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	21	18	15	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3412	3412	3412
5°	3423	3335	3344
10°	3402	3281	3278
15°	3371	3217	3200
20°	3325	3147	3124
25°	3274	3070	3039
30°	3217	2992	2954
35°	3154	2912	2878
40°	3103	2836	2800
45°	3027	2766	2732
50°	2964	2686	2661
55°	2899	2610	2577
60°	2796	2513	2501
65°	2682	2410	2407
70°	2547	2292	2298
75°	2356	2161	2199
80°	2145	2037	2102
85°	1878	1926	2046



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.0	1.5
10°-20°	114.7	4.2
20°-30°	173.4	6.3
30°-40°	209.8	7.6
40°-50°	221.8	8.1
50°-60°	208.8	7.6
60°-70°	173.2	6.3
70°-80°	121.7	4.4
80°-90°	69.8	2.5
90°-100°	170.8	6.2
100°-110°	300.7	10.9
110°-120°	262.5	9.5
120°-130°	215.2	7.8
130°-140°	174.8	6.4
140°-150°	130.8	4.8
150°-160°	91.2	3.3
160°-170°	53.7	2.0
170°-180°	17.5	0.6
0°-30°	328.1	11.9
0°-40°	537.9	19.6
0°-60°	968.5	35.2
0°-90°	1333.1	48.5
90°-120°	733.9	26.7
90°-150°	1254.7	45.6
90°-180°	1417.0	51.5
0°-180°	2750.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	423	423	423	423	423	
5°	423	422	418	422	422	40
15°	406	406	405	409	408	114
25°	371	374	375	380	381	171
35°	325	330	335	341	343	203
45°	271	280	289	296	299	209
55°	212	222	236	245	248	189
65°	147	162	178	189	194	145
75°	81	99	119	132	136	87
85°	25	45	66	80	85	27
90°	8	29	53	67	72	6
95°	18	59	329	196	144	18
105°	46	74	263	542	544	49
115°	76	99	229	430	514	75
125°	103	123	219	360	406	92
135°	122	145	208	312	355	94
145°	139	159	203	256	283	88
155°	158	171	197	223	233	73
165°	172	177	189	200	203	49
175°	180	180	181	184	183	17
180°	180	180	180	180	180	



TEST NUMBER: P332495

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7
2.5°	424.2	423.9	423.7	423.4	423.2	422.7	422.1	421.4	420.7	420.0	420.6
5°	423.2	422.8	422.5	422.2	421.9	421.4	420.6	419.9	419.2	418.4	419.3
7.5°	419.6	419.4	419.2	419.0	418.8	418.4	417.8	417.2	416.6	416.0	416.9
10°	416.5	416.4	416.3	416.2	416.1	415.8	415.3	414.7	414.2	413.7	414.6
12.5°	412.4	412.3	412.3	412.3	412.3	412.1	411.7	411.4	411.0	410.7	411.5
15°	405.6	405.8	405.9	406.0	406.1	406.0	405.6	405.3	405.0	404.7	405.6
17.5°	396.5	396.8	397.1	397.4	397.7	397.9	397.8	397.7	397.7	397.6	398.6
20°	390.0	390.3	390.7	391.0	391.3	391.5	391.6	391.7	391.8	391.9	393.0
22.5°	382.8	383.2	383.6	384.0	384.4	384.7	384.9	385.1	385.3	385.5	386.5
25°	371.1	371.7	372.4	373.0	373.6	374.1	374.4	374.7	375.0	375.4	376.5
27.5°	358.0	359.0	359.9	360.8	361.7	362.4	362.9	363.4	363.9	364.4	365.4
30°	349.3	350.2	351.0	351.8	352.7	353.5	354.2	354.9	355.7	356.4	357.6
32.5°	339.9	340.9	341.9	342.9	343.9	344.8	345.6	346.4	347.3	348.1	349.4
35°	324.7	326.0	327.2	328.5	329.8	330.9	332.0	333.0	334.1	335.1	336.6
37.5°	309.5	310.9	312.4	313.8	315.3	316.6	318.0	319.3	320.6	321.9	323.4
40°	299.6	301.0	302.4	303.7	305.1	306.5	308.0	309.5	310.9	312.4	314.0
42.5°	288.3	289.8	291.3	292.9	294.4	296.0	297.8	299.5	301.2	302.9	304.7
45°	270.7	272.7	274.7	276.7	278.7	280.7	282.7	284.7	286.7	288.7	290.5
47.5°	254.0	256.1	258.1	260.2	262.2	264.4	266.7	269.1	271.4	273.7	275.5
50°	241.9	244.2	246.5	248.8	251.1	253.4	255.8	258.1	260.4	262.7	264.8
52.5°	229.8	232.1	234.4	236.7	239.0	241.5	244.1	246.8	249.4	252.1	254.2
55°	212.1	214.3	216.5	218.7	220.9	223.6	226.7	229.9	233.0	236.2	238.3
57.5°	192.3	195.0	197.7	200.5	203.2	206.1	209.3	212.4	215.5	218.7	221.2
60°	179.4	182.1	184.9	187.6	190.3	193.4	196.9	200.4	203.8	207.3	209.7
62.5°	166.9	169.9	172.9	175.9	178.8	182.1	185.5	189.0	192.5	196.0	198.4
65°	146.7	150.1	153.5	156.8	160.2	163.7	167.2	170.8	174.4	178.0	180.6
67.5°	127.3	130.9	134.5	138.1	141.6	145.3	149.2	153.0	156.8	160.6	163.3
70°	114.1	117.6	121.2	124.8	128.4	132.2	136.2	140.2	144.2	148.2	151.0
72.5°	101.2	104.9	108.5	112.2	115.8	119.8	124.0	128.3	132.5	136.8	139.5
75°	81.4	85.3	89.2	93.1	97.0	101.1	105.6	110.0	114.4	118.8	121.8
77.5°	63.0	67.1	71.2	75.3	79.4	83.8	88.4	93.1	97.7	102.3	105.3
80°	51.6	55.8	60.0	64.2	68.4	72.8	77.5	82.1	86.7	91.4	94.5
82.5°	40.2	44.6	49.0	53.4	57.7	62.2	66.9	71.5	76.1	80.8	84.0
85°	25.1	29.5	33.9	38.3	42.8	47.3	52.1	56.8	61.5	66.3	69.4
87.5°	14.1	18.5	23.0	27.4	31.7	36.2	41.2	45.8	50.6	55.3	58.3
90°	7.9	12.8	18.1	22.7	27.2	31.6	38.2	42.8	48.0	53.2	55.9
92.5°	11.2	16.8	24.0	32.1	41.0	52.5	75.0	106.9	138.2	156.7	140.9
95°	17.8	22.3	29.4	37.4	49.4	68.1	103.2	165.4	254.2	329.2	340.2
97.5°	26.5	29.5	35.5	42.8	53.0	69.1	97.0	149.2	237.4	341.6	413.1
100°	32.1	34.8	40.0	47.0	56.4	71.2	96.1	140.2	216.4	320.1	413.4
102.5°	37.7	40.7	45.3	51.6	60.5	74.4	97.3	136.5	201.8	294.2	390.3
105°	45.6	48.8	52.6	59.0	67.5	80.7	101.6	134.8	188.2	263.1	348.8
107.5°	55.3	57.7	61.2	67.4	75.2	88.1	107.3	137.7	183.6	244.5	314.9
110°	61.4	63.6	66.8	72.5	80.4	92.5	111.7	140.1	182.7	237.6	297.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	67.2	69.2	72.6	77.9	85.5	97.5	116.0	142.8	182.7	233.2	286.9
115°	75.6	77.7	81.1	85.6	93.2	104.9	122.4	147.0	183.2	229.0	275.8
117.5°	84.9	86.4	89.2	93.7	100.5	112.3	128.8	151.5	184.1	225.8	269.2
120°	90.7	91.7	94.5	98.7	105.1	116.6	133.1	154.6	184.8	223.9	265.2
122.5°	96.4	97.1	99.7	103.4	110.0	121.1	137.4	157.5	185.6	221.7	261.1
125°	103.3	104.6	106.7	110.4	117.0	128.2	143.6	162.4	187.3	218.9	254.9
127.5°	109.8	110.8	113.3	117.6	124.5	135.4	149.8	166.7	188.1	215.3	246.9
130°	113.1	114.4	117.1	122.3	128.9	140.0	153.7	169.1	188.9	213.2	241.9
132.5°	116.8	117.8	121.4	126.3	133.5	143.8	157.1	172.0	189.7	211.4	237.5
135°	121.5	122.9	126.4	132.4	139.8	149.4	161.8	175.3	190.5	208.2	230.4
137.5°	126.6	127.9	131.6	137.3	144.9	153.8	165.0	177.2	190.5	205.9	224.4
140°	130.3	131.3	135.0	140.9	148.3	156.7	167.4	178.9	191.0	204.5	221.1
142.5°	133.9	134.9	138.5	144.2	151.3	159.5	169.7	180.1	191.5	203.8	218.5
145°	139.4	140.3	143.8	148.6	155.2	162.9	172.1	181.7	191.9	202.9	214.8
147.5°	145.7	145.9	148.9	153.9	159.4	166.3	174.9	183.3	192.3	201.6	211.6
150°	149.6	149.9	152.6	156.7	161.9	168.6	176.4	184.1	192.3	200.7	209.6
152.5°	152.9	153.0	155.8	159.7	164.4	170.6	177.5	184.7	191.7	199.3	207.3
155°	158.0	158.3	160.5	164.0	167.9	173.2	179.2	185.2	190.9	197.2	203.9
157.5°	163.0	163.0	165.0	167.7	171.1	175.3	180.4	185.2	189.9	195.0	200.5
160°	166.1	166.1	167.5	170.0	172.8	176.7	181.0	185.2	189.1	193.3	197.9
162.5°	168.9	168.7	169.8	172.0	174.5	177.6	181.5	185.2	188.2	191.6	195.7
165°	172.1	172.1	172.8	174.6	176.4	178.5	181.7	184.5	186.6	189.1	191.9
167.5°	175.3	174.9	175.3	176.6	177.6	179.3	181.6	183.6	184.9	186.5	188.5
170°	176.7	176.4	176.7	177.8	178.5	179.5	181.3	183.1	183.8	184.8	186.3
172.5°	178.1	177.8	177.8	178.6	179.0	179.8	181.0	182.5	182.7	183.1	184.3
175°	179.5	179.2	179.2	179.5	179.9	179.9	180.6	181.7	181.3	181.3	182.0
177.5°	180.2	179.9	179.6	179.9	179.9	179.9	180.2	180.7	180.2	180.2	180.5
180°	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7
2.5°	421.2	421.8	422.4	422.6	422.6	422.5	422.4	422.3
5°	420.1	420.9	421.8	422.2	422.1	421.9	421.8	421.7
7.5°	417.9	418.8	419.8	420.2	420.1	420.0	419.9	419.8
10°	415.6	416.5	417.5	417.9	417.8	417.7	417.6	417.5
12.5°	412.4	413.3	414.1	414.5	414.5	414.5	414.5	414.4
15°	406.6	407.5	408.5	408.9	408.8	408.7	408.6	408.5
17.5°	399.5	400.5	401.5	401.9	401.8	401.7	401.7	401.6
20°	394.0	395.1	396.1	396.7	396.7	396.7	396.7	396.7
22.5°	387.6	388.6	389.7	390.3	390.5	390.6	390.8	391.0
25°	377.7	378.8	380.0	380.6	380.7	380.8	380.9	381.0
27.5°	366.5	367.6	368.7	369.3	369.4	369.5	369.6	369.8
30°	358.7	359.9	361.0	361.7	361.9	362.2	362.4	362.6
32.5°	350.7	352.1	353.4	354.2	354.4	354.6	354.8	355.0
35°	338.1	339.5	341.0	341.9	342.2	342.5	342.9	343.2
37.5°	324.9	326.3	327.8	328.8	329.1	329.4	329.8	330.1
40°	315.6	317.1	318.7	319.7	320.1	320.6	321.0	321.4
42.5°	306.4	308.2	309.9	311.0	311.3	311.6	312.0	312.3
45°	292.3	294.1	295.9	297.0	297.6	298.1	298.6	299.1
47.5°	277.4	279.2	281.1	282.3	283.0	283.6	284.2	284.9
50°	266.9	269.0	271.1	272.5	273.1	273.7	274.4	275.0
52.5°	256.3	258.4	260.5	261.9	262.5	263.1	263.8	264.4
55°	240.4	242.5	244.6	246.0	246.6	247.2	247.9	248.5
57.5°	223.7	226.2	228.7	230.2	230.8	231.4	232.0	232.6
60°	212.2	214.6	217.0	218.6	219.5	220.3	221.2	222.0
62.5°	200.8	203.2	205.6	207.3	208.1	208.9	209.8	210.6
65°	183.2	185.9	188.5	190.2	191.1	191.9	192.8	193.6
67.5°	166.0	168.7	171.3	173.1	173.9	174.7	175.5	176.4
70°	153.8	156.7	159.5	161.3	162.0	162.8	163.5	164.2
72.5°	142.3	145.1	147.8	149.6	150.4	151.2	152.1	152.9
75°	124.7	127.6	130.6	132.5	133.5	134.4	135.4	136.3
77.5°	108.3	111.3	114.3	116.3	117.3	118.3	119.3	120.3
80°	97.7	100.8	104.0	106.0	106.8	107.7	108.5	109.3
82.5°	87.2	90.5	93.7	95.8	96.7	97.6	98.6	99.5
85°	72.6	75.7	78.9	81.0	82.0	83.1	84.1	85.2
87.5°	61.4	64.5	67.7	69.7	70.7	71.7	72.5	73.4
90°	59.3	62.7	66.1	68.1	69.3	70.5	71.0	71.8
92.5°	119.9	105.7	98.0	92.9	89.5	88.5	88.1	88.9
95°	308.7	256.8	212.3	179.9	163.5	153.5	148.1	144.5
97.5°	430.7	413.1	381.3	346.2	321.7	301.4	291.7	285.2
100°	467.9	477.8	463.3	439.0	408.9	388.1	378.3	376.2
102.5°	463.8	501.7	509.4	500.3	482.3	467.5	457.1	455.7
105°	432.3	496.1	533.7	550.0	551.5	549.5	545.4	544.1
107.5°	389.1	456.8	508.7	541.9	560.1	568.9	573.2	574.9
110°	363.0	426.5	480.2	520.7	546.7	562.3	569.5	573.6



TEST NUMBER: P332495

CATALOG NUMBER: SA4XXDIP-C350D365U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	343.1	399.5	450.3	490.7	520.1	538.9	548.6	554.6
115°	322.3	368.1	411.8	447.2	475.9	497.8	509.9	513.5
117.5°	310.5	348.6	383.4	413.6	438.3	457.0	469.2	472.3
120°	304.5	339.4	369.8	396.4	417.4	433.8	443.8	448.5
122.5°	299.2	333.0	360.9	384.3	402.1	416.1	424.6	429.3
125°	290.8	323.2	349.6	370.3	385.1	396.0	403.3	406.1
127.5°	280.7	311.6	337.8	357.6	372.5	382.3	388.7	391.6
130°	273.1	303.0	328.9	348.9	364.0	373.5	379.7	382.5
132.5°	265.5	293.5	318.8	338.8	353.6	364.2	370.2	373.0
135°	254.3	279.0	302.2	321.0	335.8	346.3	352.6	355.4
137.5°	244.4	265.4	285.1	302.1	315.9	326.1	331.3	334.4
140°	238.7	256.7	274.0	289.8	302.6	310.9	316.4	319.8
142.5°	233.7	249.5	264.3	278.0	289.4	297.1	301.9	304.3
145°	226.7	239.4	250.6	261.1	270.3	276.7	280.7	282.9
147.5°	221.1	230.7	239.3	247.2	254.1	259.6	262.6	263.6
150°	218.1	226.2	233.3	239.6	245.3	249.9	252.0	252.3
152.5°	215.0	222.0	228.5	233.7	238.5	242.2	243.5	243.9
155°	210.3	215.9	221.2	225.5	229.0	231.8	232.9	232.9
157.5°	205.3	210.0	214.5	217.9	220.5	222.7	223.3	223.3
160°	202.2	206.0	209.9	212.8	214.9	217.0	217.4	217.4
162.5°	199.1	202.4	205.4	208.0	209.5	211.6	212.0	211.7
165°	194.7	196.9	199.3	201.1	202.5	203.9	203.6	203.2
167.5°	190.6	192.2	194.2	195.2	195.9	196.9	196.8	196.5
170°	188.0	189.1	190.5	191.6	192.3	192.6	192.3	192.3
172.5°	185.8	186.5	187.4	188.2	188.6	188.9	188.6	188.0
175°	182.7	183.1	183.8	183.8	183.8	184.5	183.8	183.1
177.5°	180.7	181.0	181.0	181.3	181.0	181.3	180.7	180.2
180°	179.9	179.9	179.9	179.9	179.9	179.9	179.9	179.9

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