

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: P331338-927

Luminaire Tested: **SA2XXDIP-C675D330U927-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331338-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D330U927-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3153.9 lumens
Efficiency: N/A
Efficacy: 90.1 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: Semi-Direct

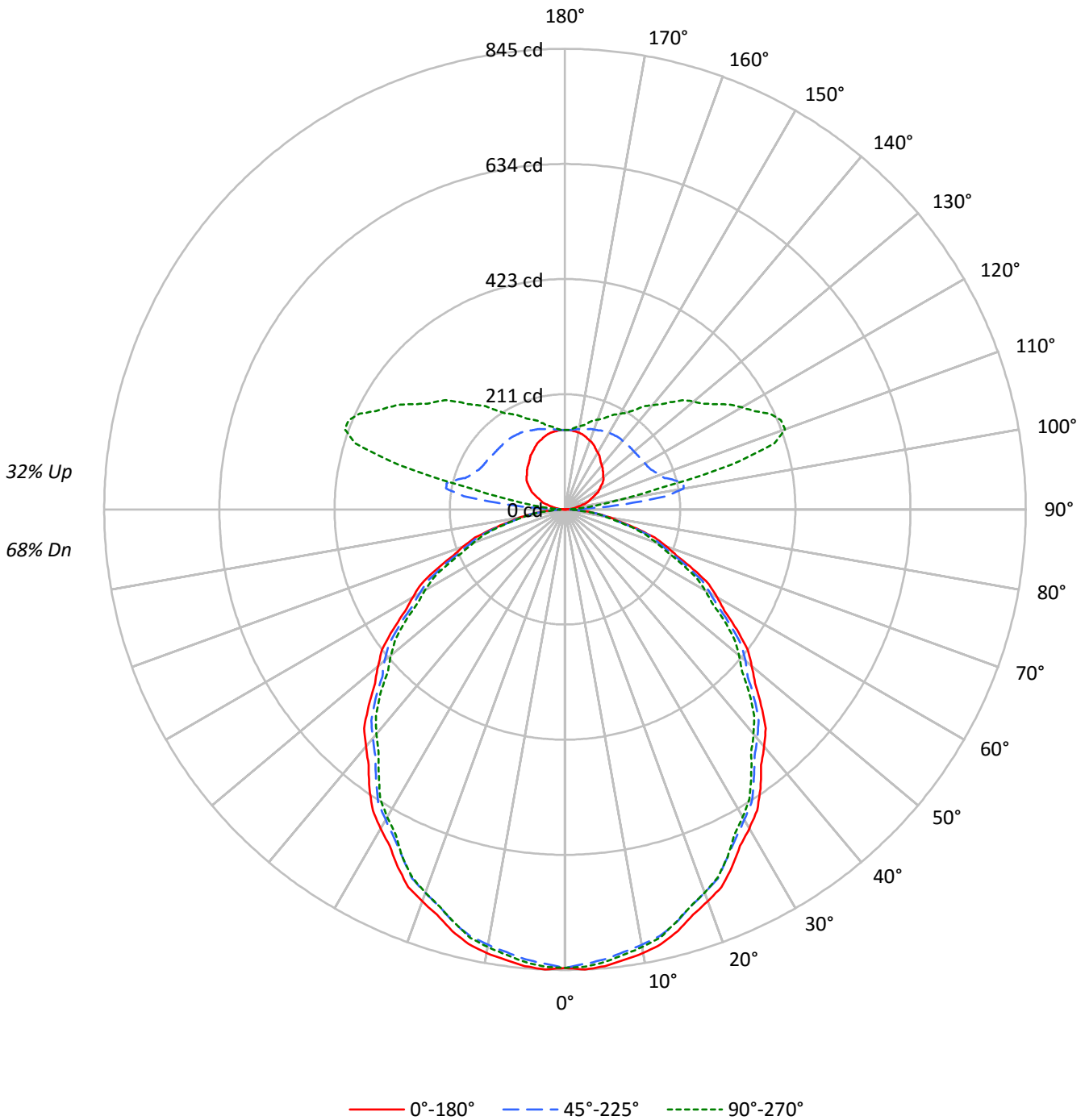
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331338-927

CATALOG NUMBER: SA2XXDIP-C675D330U927-4F0-1E-UDD-F4

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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	73	73	73	68
1	102	97	93	90	96	92	88	85	82	79	77	73	71	69	64	63	61	57
2	93	85	79	73	87	80	75	70	72	67	64	64	60	57	56	54	52	48
3	85	75	67	61	79	71	64	59	63	58	54	56	52	49	50	47	44	41
4	77	66	58	52	73	63	56	50	56	50	46	50	46	42	45	41	38	35
5	71	59	51	45	67	56	49	43	51	44	40	45	40	36	40	36	33	30
6	66	53	45	39	62	51	43	37	46	39	35	41	36	32	37	32	29	27
7	61	48	40	34	57	46	38	33	41	35	31	37	32	28	33	29	26	24
8	57	44	36	30	53	42	34	29	38	32	27	34	29	25	31	27	23	21
9	53	40	32	27	50	38	31	26	35	29	25	32	26	23	28	24	21	19
10	49	37	29	25	47	35	28	24	32	26	22	29	24	21	26	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13580	13580	13580
5°	13632	13434	13514
10°	13550	13298	13365
15°	13382	13125	13112
20°	13144	12866	12854
25°	12909	12549	12549
30°	12603	12258	12152
35°	12321	11907	11732
40°	11965	11556	11335
45°	11615	11209	10930
50°	11233	10846	10462
55°	10835	10427	10038
60°	10395	9923	9558
65°	9918	9425	8993
70°	9314	8818	8398
75°	8478	8122	7923
80°	7522	7290	6918
85°	6150	5835	5243



TEST NUMBER: P331338-927

CATALOG NUMBER: SA2XXDIP-C675D330U927-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.1	2.5
10°-20°	222.5	7.1
20°-30°	327.1	10.4
30°-40°	379.9	12.0
40°-50°	379.5	12.0
50°-60°	331.0	10.5
60°-70°	244.7	7.8
70°-80°	138.6	4.4
80°-90°	38.6	1.2
90°-100°	58.2	1.8
100°-110°	197.5	6.3
110°-120°	209.8	6.7
120°-130°	172.7	5.5
130°-140°	138.7	4.4
140°-150°	104.8	3.3
150°-160°	73.7	2.3
160°-170°	43.4	1.4
170°-180°	14.1	0.4
0°-30°	628.7	19.9
0°-40°	1008.6	32.0
0°-60°	1719.1	54.5
0°-90°	2141.1	67.9
90°-120°	465.5	14.8
90°-150°	881.7	28.0
90°-180°	1013.0	32.1
0°-180°	3153.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	841	841	841	841	841	
5°	841	838	829	835	834	80
15°	801	795	785	788	784	225
25°	725	718	704	706	704	333
35°	625	617	604	599	595	390
45°	509	503	491	482	479	392
55°	385	380	370	361	357	344
65°	260	254	247	240	235	257
75°	136	134	130	126	127	145
85°	33	32	32	29	28	38
90°	0	4	10	9	9	2
95°	10	24	110	41	32	10
105°	34	52	207	371	315	36
115°	60	76	174	358	415	60
125°	84	99	167	290	337	75
135°	98	118	165	244	279	76
145°	112	129	164	204	223	71
155°	128	138	159	180	187	59
165°	139	144	153	162	164	39
175°	145	145	147	148	148	14
180°	146	146	146	146	146	



TEST NUMBER: P331338-927

CATALOG NUMBER: SA2XXDIP-C675D330U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1
2.5°	844.9	844.2	843.5	842.8	842.1	840.9	839.3	837.7	836.1	834.6	836.0
5°	841.1	840.3	839.6	838.9	838.2	836.9	834.9	832.9	830.9	828.9	830.4
7.5°	833.6	832.5	831.4	830.3	829.2	827.6	825.6	823.6	821.6	819.5	820.9
10°	826.5	825.2	823.9	822.7	821.5	819.8	817.6	815.5	813.3	811.1	812.5
12.5°	816.8	815.7	814.5	813.4	812.3	810.7	808.5	806.4	804.2	802.1	803.1
15°	800.6	799.5	798.4	797.4	796.3	794.6	792.3	789.9	787.6	785.2	786.0
17.5°	779.9	778.8	777.8	776.7	775.6	773.9	771.5	769.1	766.8	764.4	765.2
20°	765.0	764.0	762.9	761.8	760.7	758.9	756.4	753.9	751.4	748.8	749.4
22.5°	750.1	748.6	747.1	745.6	744.1	742.2	739.8	737.4	735.1	732.7	732.8
25°	724.6	723.2	721.8	720.3	718.8	716.6	713.5	710.5	707.4	704.4	704.7
27.5°	695.5	694.2	692.9	691.6	690.3	688.5	686.0	683.7	681.2	678.8	678.3
30°	676.0	674.6	673.2	671.8	670.3	668.3	665.6	662.9	660.2	657.5	657.0
32.5°	655.4	654.2	653.1	651.9	650.8	648.8	645.9	643.1	640.2	637.4	636.4
35°	625.1	623.4	621.5	619.7	617.9	615.6	612.8	609.8	607.0	604.1	603.0
37.5°	591.0	589.4	587.8	586.2	584.7	582.4	579.6	576.7	573.9	570.9	569.6
40°	567.7	566.3	564.8	563.4	562.0	559.8	556.9	554.1	551.2	548.3	546.7
42.5°	545.1	543.6	542.2	540.7	539.3	537.2	534.2	531.4	528.5	525.7	523.9
45°	508.7	507.4	506.1	504.9	503.7	501.7	499.0	496.3	493.6	490.9	488.9
47.5°	472.5	471.3	470.1	468.9	467.7	465.7	462.9	460.1	457.3	454.5	452.4
50°	447.2	446.3	445.4	444.5	443.6	441.9	439.4	436.9	434.4	431.8	429.4
52.5°	422.6	421.4	420.3	419.1	417.9	416.1	413.8	411.4	409.0	406.6	404.6
55°	384.9	383.9	382.8	381.7	380.6	379.0	376.8	374.7	372.6	370.4	368.2
57.5°	347.1	346.3	345.4	344.5	343.6	342.1	339.7	337.3	334.9	332.6	330.4
60°	321.9	321.2	320.4	319.7	319.0	317.3	314.9	312.4	309.8	307.3	305.3
62.5°	297.3	296.1	295.0	293.8	292.7	291.1	289.2	287.2	285.3	283.4	281.5
65°	259.6	258.5	257.5	256.4	255.2	253.8	252.1	250.3	248.4	246.7	245.0
67.5°	221.3	220.4	219.5	218.6	217.8	216.6	214.9	213.3	211.8	210.1	208.8
70°	197.3	196.6	195.9	195.2	194.5	193.3	191.6	190.0	188.5	186.8	185.5
72.5°	172.8	172.0	171.3	170.6	169.8	169.0	167.9	166.9	165.9	164.8	163.6
75°	135.9	135.5	135.1	134.8	134.4	133.8	132.9	132.0	131.1	130.2	129.1
77.5°	102.9	102.3	101.6	101.0	100.4	100.0	99.6	99.2	98.9	98.5	98.0
80°	80.9	80.7	80.5	80.3	80.2	79.9	79.5	79.1	78.8	78.4	77.9
82.5°	60.2	60.1	60.1	60.0	60.0	59.9	59.7	59.5	59.3	59.0	58.4
85°	33.2	33.0	32.8	32.6	32.4	32.2	32.1	31.9	31.7	31.5	31.0
87.5°	11.7	11.6	11.5	11.3	11.2	11.0	11.0	11.2	11.2	10.9	10.5
90°	0.3	1.1	2.2	2.8	3.3	4.2	5.6	7.5	9.3	9.5	9.3
92.5°	3.4	4.9	7.0	8.2	10.1	12.7	19.0	28.0	35.9	36.4	30.7
95°	9.8	10.9	13.7	16.2	20.7	27.4	40.3	64.6	97.1	109.7	96.0
97.5°	15.9	17.4	20.4	24.2	29.4	37.0	53.2	87.1	141.1	187.3	196.5
100°	21.5	22.4	24.9	29.4	35.0	42.9	57.7	91.8	152.3	221.1	261.4
102.5°	26.7	27.3	29.9	34.3	40.2	48.0	61.7	92.1	148.0	222.2	285.6
105°	34.1	35.3	37.2	41.4	47.6	55.5	68.6	93.5	139.7	207.4	281.9
107.5°	42.2	43.1	45.0	48.9	55.0	62.9	75.7	97.4	135.5	191.5	257.3
110°	47.6	48.7	50.4	54.0	59.9	68.0	80.3	100.4	134.7	183.9	241.9



TEST NUMBER: P331338-927

CATALOG NUMBER: SA2XXDIP-C675D330U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	52.5	53.6	55.5	58.9	64.6	73.0	84.8	103.9	134.8	179.0	231.1
115°	60.2	61.6	63.3	66.6	72.2	79.8	91.8	108.8	136.0	173.6	217.8
117.5°	68.1	69.2	70.9	73.9	79.3	87.1	98.2	114.2	138.1	170.9	209.4
120°	73.0	74.1	75.9	78.3	84.0	91.8	102.7	117.9	139.4	169.4	204.9
122.5°	77.8	78.7	80.3	83.1	88.6	96.7	106.9	121.0	140.9	168.4	201.1
125°	84.0	84.8	86.5	89.8	95.5	103.3	113.4	126.0	143.3	166.8	195.7
127.5°	88.9	90.0	92.4	96.1	101.4	109.5	119.3	130.6	145.7	165.9	190.6
130°	91.8	92.9	95.7	99.7	105.3	113.0	122.9	133.5	147.5	165.4	187.3
132.5°	94.5	95.9	98.9	103.0	108.8	116.7	126.0	136.4	149.3	165.2	184.6
135°	98.5	99.7	103.0	107.2	113.7	121.4	130.5	140.2	151.5	164.9	180.8
137.5°	102.3	103.7	107.0	111.5	117.9	125.2	134.0	143.1	153.4	164.8	178.2
140°	105.3	106.4	109.7	114.2	120.3	127.6	136.0	144.7	154.2	164.6	176.6
142.5°	108.1	109.1	112.2	116.7	122.6	129.4	137.6	146.1	154.9	164.6	175.1
145°	112.5	113.7	116.5	120.6	126.3	132.4	140.0	147.8	155.6	164.0	173.0
147.5°	117.2	118.0	120.7	124.6	129.3	134.8	141.9	148.8	155.8	163.0	170.9
150°	120.3	121.2	123.4	127.1	131.3	136.3	142.8	149.2	155.6	162.3	169.1
152.5°	123.5	123.9	126.1	129.3	133.3	137.8	143.6	149.4	155.2	161.2	167.5
155°	127.9	128.2	129.8	132.9	136.0	140.2	145.0	149.7	154.5	159.2	164.6
157.5°	131.6	131.9	133.2	135.9	138.4	141.9	145.9	149.7	153.2	157.2	161.8
160°	134.0	134.4	135.5	137.7	140.0	143.1	146.4	149.7	152.6	155.9	159.8
162.5°	136.6	136.3	137.5	139.3	141.3	143.7	146.6	149.5	151.9	154.8	158.0
165°	139.4	139.1	139.7	141.3	142.8	144.4	146.9	148.9	150.6	152.6	155.0
167.5°	141.7	141.4	141.9	143.0	144.0	145.0	146.9	148.5	149.3	150.6	152.2
170°	143.3	142.8	143.1	143.9	144.4	145.3	146.6	148.1	148.6	149.5	150.6
172.5°	144.2	143.9	143.7	144.6	144.9	145.5	146.5	147.4	147.7	148.1	149.0
175°	145.3	145.0	144.7	145.3	145.3	145.5	146.1	146.6	146.4	146.6	146.9
177.5°	145.8	145.3	145.1	145.5	145.5	145.5	145.8	146.2	145.8	145.5	145.8
180°	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5



TEST NUMBER: P331338-927

CATALOG NUMBER: SA2XXDIP-C675D330U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1
2.5°	837.4	838.9	840.3	840.9	840.6	840.3	840.0	839.8
5°	831.8	833.2	834.6	835.2	834.9	834.5	834.2	833.8
7.5°	822.4	823.9	825.3	825.8	825.4	825.1	824.7	824.3
10°	814.0	815.5	816.9	817.3	816.8	816.3	815.7	815.2
12.5°	804.1	805.1	806.1	806.4	806.0	805.6	805.3	804.9
15°	786.7	787.4	788.1	788.1	787.1	786.2	785.4	784.4
17.5°	766.0	766.8	767.7	767.7	766.8	766.0	765.1	764.2
20°	750.0	750.5	751.0	750.9	750.2	749.5	748.8	748.1
22.5°	732.9	733.0	733.1	732.9	732.5	732.1	731.7	731.3
25°	705.1	705.4	705.8	705.8	705.4	705.1	704.7	704.4
27.5°	677.7	677.2	676.7	676.0	675.1	674.2	673.4	672.5
30°	656.4	655.8	655.3	654.7	653.9	653.2	652.5	651.8
32.5°	635.5	634.5	633.5	632.7	632.0	631.3	630.5	629.8
35°	602.0	600.9	599.8	598.8	597.9	597.0	596.1	595.2
37.5°	568.3	567.0	565.6	564.5	563.6	562.8	562.0	561.1
40°	545.1	543.4	541.9	540.7	540.0	539.2	538.5	537.8
42.5°	522.1	520.4	518.6	517.2	516.2	515.2	514.2	513.2
45°	487.0	485.0	483.0	481.6	480.9	480.2	479.5	478.7
47.5°	450.4	448.2	446.2	444.6	443.5	442.5	441.5	440.5
50°	426.8	424.3	421.8	420.1	419.1	418.3	417.4	416.5
52.5°	402.4	400.4	398.3	396.6	395.5	394.3	393.1	391.9
55°	366.1	363.9	361.8	360.2	359.3	358.5	357.5	356.6
57.5°	328.3	326.1	324.1	322.7	321.9	321.3	320.6	319.9
60°	303.3	301.3	299.4	298.2	297.6	297.1	296.5	296.0
62.5°	279.7	277.9	276.1	274.8	274.1	273.4	272.7	272.0
65°	243.4	241.8	240.2	238.9	238.1	237.1	236.2	235.4
67.5°	207.6	206.4	205.1	204.1	203.4	202.6	201.9	201.2
70°	184.3	183.1	181.8	180.8	180.1	179.4	178.6	177.9
72.5°	162.3	161.1	159.8	158.8	158.3	157.7	157.2	156.5
75°	128.0	127.0	125.9	125.6	125.9	126.3	126.6	127.0
77.5°	97.4	96.9	96.3	95.9	95.3	94.8	94.3	93.8
80°	77.4	76.8	76.3	75.8	75.5	75.1	74.8	74.4
82.5°	57.7	57.0	56.3	55.9	55.8	55.8	55.7	55.6
85°	30.5	29.9	29.4	29.0	28.8	28.7	28.5	28.3
87.5°	10.0	9.4	9.1	8.9	8.7	8.6	8.5	8.3
90°	9.0	8.4	9.0	9.3	9.3	9.3	9.3	9.3
92.5°	24.4	20.9	18.6	16.9	16.6	15.8	15.9	15.5
95°	73.4	56.2	44.5	38.3	34.7	32.5	31.6	31.9
97.5°	171.1	140.0	109.7	89.5	76.1	69.2	65.2	62.8
100°	255.6	220.9	182.5	148.6	125.4	113.4	105.3	100.2
102.5°	310.9	303.0	275.0	239.1	213.8	193.3	183.2	176.3
105°	340.1	371.7	375.3	366.1	348.7	331.4	319.3	315.4
107.5°	319.0	366.7	395.8	409.3	411.5	410.6	408.1	403.0
110°	300.9	351.0	386.8	409.8	421.8	427.1	429.7	429.4



TEST NUMBER: P331338-927

CATALOG NUMBER: SA2XXDIP-C675D330U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	284.3	332.4	370.7	397.0	413.8	422.6	427.4	428.9
115°	264.0	307.0	343.7	372.6	392.4	405.3	412.6	415.1
117.5°	248.6	286.5	319.7	346.7	367.0	380.6	388.2	390.4
120°	241.0	275.7	305.4	330.8	350.5	363.6	371.7	374.5
122.5°	235.0	266.7	294.9	317.8	335.4	348.4	355.6	357.9
125°	226.2	255.0	279.6	300.6	316.9	327.5	334.5	336.8
127.5°	217.5	243.6	266.8	286.1	300.3	310.3	316.3	318.1
130°	211.9	236.0	258.1	276.6	290.3	299.8	305.4	307.6
132.5°	206.5	228.8	249.1	266.5	280.0	289.5	294.6	296.7
135°	199.0	217.5	236.0	251.6	263.6	272.9	278.0	279.1
137.5°	193.1	208.5	223.2	236.8	247.8	255.7	260.2	261.8
140°	189.2	202.6	215.6	227.8	236.8	244.1	248.3	249.9
142.5°	186.1	197.5	208.6	218.9	227.4	234.0	237.7	238.1
145°	181.6	190.9	199.6	207.7	214.4	219.2	222.0	222.8
147.5°	178.2	185.5	192.3	198.2	203.7	207.6	209.5	210.0
150°	175.8	182.0	187.8	192.8	197.0	200.4	202.1	202.4
152.5°	173.3	179.0	184.0	188.4	191.7	194.6	195.8	195.9
155°	169.9	174.4	178.6	181.6	184.7	186.7	187.8	187.3
157.5°	166.0	169.7	173.2	175.6	177.8	179.4	179.9	179.9
160°	163.4	166.5	169.6	171.6	173.6	174.9	175.2	175.2
162.5°	161.0	163.7	166.3	167.8	169.8	170.7	171.0	170.7
165°	157.3	159.2	161.2	162.3	163.4	164.6	164.6	164.3
167.5°	153.8	155.3	156.6	157.6	158.1	158.8	158.7	158.4
170°	152.0	152.8	153.9	154.5	154.8	155.6	155.3	154.8
172.5°	150.0	150.6	151.5	151.8	152.1	152.5	152.2	151.9
175°	147.8	148.1	148.4	148.6	148.6	148.9	148.6	148.1
177.5°	146.2	146.2	146.5	146.5	146.5	146.5	146.2	145.8
180°	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5

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