

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: P332548-830

Luminaire Tested: **S124DIP-S575D590U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332548-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S575D590U830-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4163.2 lumens
Efficiency: N/A
Efficacy: 126.9 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

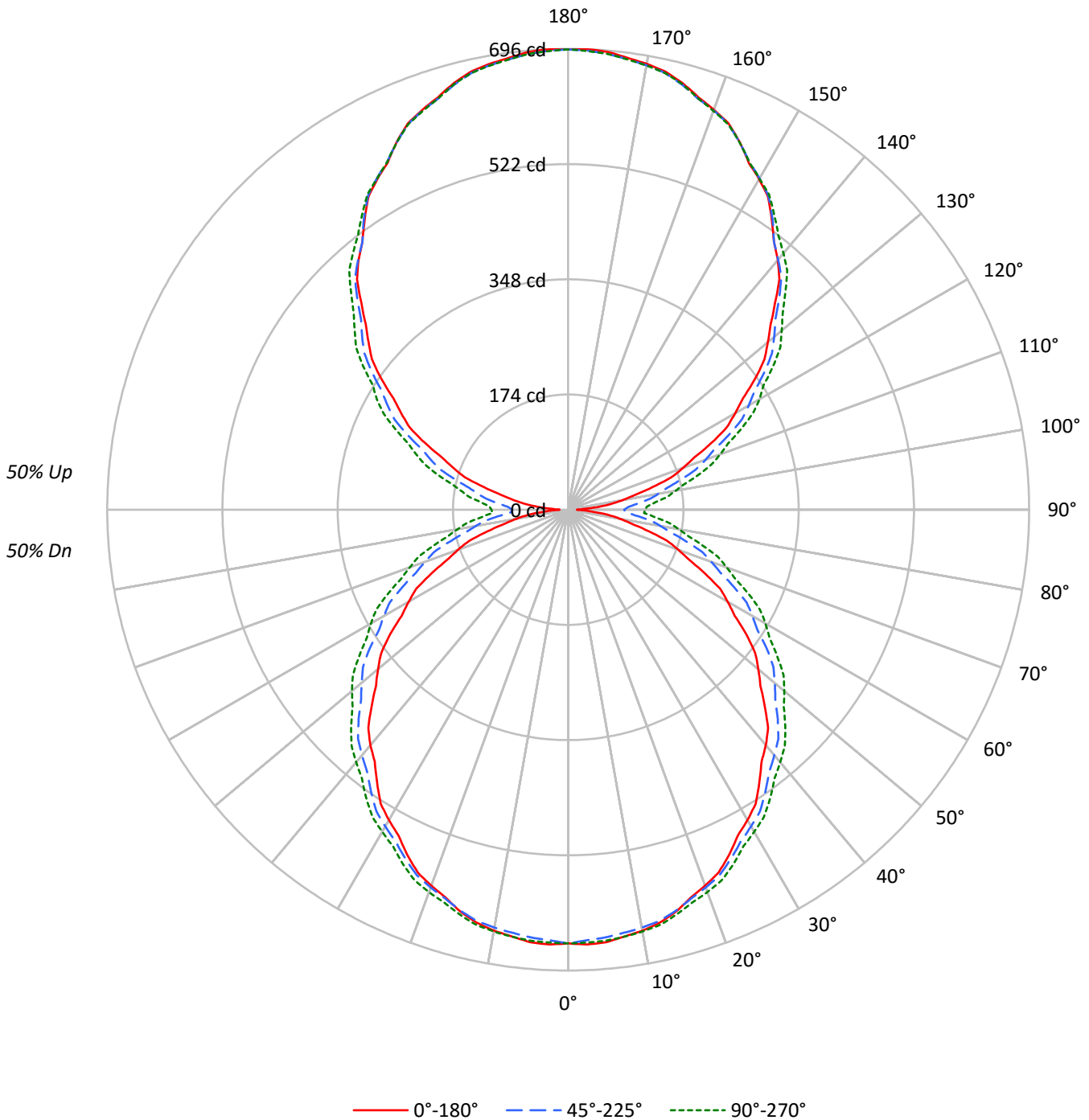
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	74	68	63	62	58	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	34	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	27	23
5	67	55	46	40	61	50	43	37	43	37	32	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25	29	25	21	24	20	18	15
8	52	40	32	26	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	17	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5288	5288	5288
5°	5304	5168	5182
10°	5272	5083	5079
15°	5225	4985	4958
20°	5153	4877	4840
25°	5073	4756	4710
30°	4986	4636	4576
35°	4887	4512	4460
40°	4809	4395	4338
45°	4692	4287	4233
50°	4593	4163	4123
55°	4491	4045	3993
60°	4332	3894	3876
65°	4156	3735	3731
70°	3945	3551	3561
75°	3649	3349	3408
80°	3322	3156	3259
85°	2903	2980	3172



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.0	1.5
10°-20°	177.7	4.3
20°-30°	268.7	6.5
30°-40°	325.1	7.8
40°-50°	343.7	8.3
50°-60°	323.5	7.8
60°-70°	268.4	6.4
70°-80°	188.5	4.5
80°-90°	108.6	2.6
90°-100°	109.1	2.6
100°-110°	182.7	4.4
110°-120°	262.0	6.3
120°-130°	321.7	7.7
130°-140°	349.0	8.4
140°-150°	337.0	8.1
150°-160°	282.1	6.8
160°-170°	187.7	4.5
170°-180°	65.7	1.6
0°-30°	508.4	12.2
0°-40°	833.5	20.0
0°-60°	1500.7	36.0
0°-90°	2066.2	49.6
90°-120°	553.7	13.3
90°-150°	1561.4	37.5
90°-180°	2097.0	50.4
0°-180°	4163.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	656	653	648	654	654	62
15°	629	629	627	633	633	177
25°	575	579	582	589	590	265
35°	503	512	519	529	532	315
45°	420	433	447	459	464	324
55°	329	344	366	380	385	293
65°	227	251	276	293	300	225
75°	126	153	184	204	211	134
85°	39	70	103	124	132	41
90°	13	49	84	108	116	10
95°	42	71	105	125	133	43
105°	132	148	176	196	204	140
115°	239	246	268	283	288	236
125°	344	345	361	374	378	307
135°	442	445	450	460	464	342
145°	536	537	538	541	543	335
155°	613	613	612	614	612	282
165°	667	666	664	667	666	188
175°	694	691	691	694	691	66
180°	695	695	695	695	695	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	657.3	657.0	656.6	656.1	655.7	655.1	654.0	653.0	651.9	650.8	651.8
5°	655.7	655.3	654.7	654.2	653.7	652.9	651.8	650.6	649.5	648.4	649.7
7.5°	650.2	649.8	649.5	649.2	648.9	648.4	647.4	646.5	645.5	644.5	646.0
10°	645.5	645.3	645.1	645.0	644.8	644.3	643.5	642.6	641.9	641.0	642.5
12.5°	638.9	638.9	638.9	638.9	638.9	638.6	638.0	637.4	636.9	636.3	637.6
15°	628.6	628.8	628.9	629.1	629.2	629.1	628.6	628.1	627.5	627.1	628.6
17.5°	614.3	614.8	615.3	615.8	616.3	616.5	616.4	616.3	616.2	616.1	617.6
20°	604.4	604.8	605.3	605.9	606.3	606.6	606.8	607.0	607.1	607.3	608.9
22.5°	593.2	593.8	594.5	595.0	595.7	596.2	596.4	596.7	597.0	597.3	599.0
25°	575.0	576.0	577.0	578.0	578.9	579.7	580.1	580.6	581.2	581.6	583.4
27.5°	554.8	556.2	557.6	559.1	560.5	561.6	562.3	563.1	563.8	564.6	566.3
30°	541.3	542.6	543.8	545.2	546.5	547.7	548.8	550.0	551.1	552.3	554.1
32.5°	526.6	528.2	529.7	531.3	532.9	534.3	535.6	536.9	538.1	539.4	541.4
35°	503.1	505.1	507.1	509.0	511.0	512.7	514.3	516.0	517.6	519.2	521.6
37.5°	479.6	481.7	484.0	486.3	488.5	490.7	492.7	494.7	496.7	498.7	501.1
40°	464.3	466.4	468.5	470.6	472.8	474.9	477.2	479.5	481.8	484.1	486.5
42.5°	446.7	449.0	451.4	453.8	456.2	458.7	461.4	464.0	466.7	469.4	472.1
45°	419.5	422.6	425.7	428.9	431.9	435.0	438.1	441.2	444.3	447.4	450.2
47.5°	393.6	396.7	399.9	403.1	406.3	409.7	413.3	416.9	420.5	424.0	427.0
50°	374.8	378.3	381.9	385.6	389.2	392.8	396.3	399.9	403.5	407.1	410.3
52.5°	356.0	359.6	363.2	366.7	370.3	374.2	378.3	382.4	386.5	390.6	393.9
55°	328.6	332.0	335.5	338.8	342.2	346.4	351.3	356.2	361.1	366.0	369.3
57.5°	297.9	302.2	306.4	310.7	314.9	319.4	324.2	329.1	334.0	338.8	342.7
60°	278.0	282.2	286.4	290.7	294.9	299.7	305.1	310.5	315.8	321.2	325.0
62.5°	258.6	263.3	267.9	272.5	277.1	282.1	287.5	292.8	298.3	303.7	307.4
65°	227.3	232.6	237.8	243.0	248.3	253.6	259.1	264.7	270.2	275.8	279.8
67.5°	197.3	202.8	208.4	214.0	219.4	225.2	231.1	237.0	243.0	248.9	253.1
70°	176.7	182.3	187.8	193.4	199.0	204.8	210.9	217.2	223.4	229.6	233.9
72.5°	156.8	162.5	168.1	173.8	179.5	185.6	192.2	198.8	205.4	212.0	216.2
75°	126.1	132.1	138.2	144.2	150.2	156.7	163.5	170.4	177.3	184.1	188.7
77.5°	97.6	104.0	110.4	116.7	123.1	129.9	137.0	144.2	151.4	158.5	163.2
80°	79.9	86.4	93.0	99.5	106.0	112.8	120.1	127.2	134.4	141.6	146.5
82.5°	62.3	69.1	75.9	82.7	89.4	96.4	103.6	110.7	117.9	125.2	130.2
85°	38.8	45.7	52.6	59.4	66.3	73.3	80.7	88.0	95.4	102.6	107.5
87.5°	22.1	28.9	35.8	42.8	49.7	56.8	64.1	71.4	78.8	86.1	91.0
90°	13.4	21.2	29.0	36.9	44.7	52.6	60.5	68.5	76.4	84.5	89.9
92.5°	22.6	30.1	37.4	44.8	52.1	59.7	67.4	75.0	82.7	90.4	95.4
95°	41.8	48.3	54.7	61.2	67.6	74.6	82.1	89.6	97.2	104.6	109.4
97.5°	65.0	70.5	76.0	81.4	86.9	93.5	101.1	108.7	116.3	123.9	128.6
100°	83.3	88.0	92.7	97.5	102.2	108.3	115.6	123.1	130.5	138.0	142.6
102.5°	103.1	107.0	110.9	114.8	118.8	124.3	131.5	138.7	145.9	153.2	157.7
105°	131.9	135.3	138.6	142.0	145.3	150.3	156.8	163.3	169.8	176.3	180.8
107.5°	163.4	166.3	169.1	171.9	174.7	179.0	184.7	190.6	196.3	202.1	206.4
110°	184.4	186.9	189.4	191.9	194.4	198.5	204.1	209.6	215.3	220.8	224.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	206.1	208.2	210.3	212.4	214.4	218.0	223.3	228.5	233.8	238.9	242.5
115°	238.7	240.3	241.8	243.2	244.7	247.9	252.9	257.8	262.8	267.8	271.3
117.5°	270.2	271.3	272.2	273.1	274.2	277.0	281.6	286.3	291.1	295.8	298.7
120°	290.8	291.7	292.7	293.6	294.6	297.3	301.6	306.0	310.4	314.7	317.4
122.5°	312.6	312.9	313.2	313.5	313.9	316.1	320.4	324.7	329.0	333.3	336.2
125°	344.3	344.1	343.9	343.8	343.7	345.5	349.5	353.5	357.4	361.4	364.2
127.5°	373.5	373.7	373.9	374.1	374.3	375.9	378.8	381.7	384.7	387.6	390.3
130°	393.5	393.8	394.0	394.2	394.4	395.8	398.3	401.0	403.6	406.1	408.9
132.5°	414.6	414.7	414.8	414.9	415.0	416.0	418.1	420.1	422.1	424.0	426.6
135°	441.8	442.4	443.2	443.9	444.6	445.5	446.7	447.8	448.9	450.1	452.5
137.5°	472.0	472.2	472.4	472.6	472.8	473.3	473.9	474.7	475.4	476.2	478.2
140°	492.3	492.4	492.4	492.5	492.6	492.7	492.9	493.0	493.2	493.3	495.3
142.5°	510.2	510.4	510.6	510.8	511.0	511.0	510.9	510.7	510.5	510.2	512.1
145°	535.6	535.9	536.2	536.6	536.9	537.1	537.2	537.3	537.4	537.5	538.5
147.5°	561.0	561.4	561.8	562.2	562.6	562.8	562.7	562.6	562.5	562.4	562.4
150°	576.5	576.8	577.1	577.4	577.8	577.9	577.9	577.9	577.9	577.9	577.9
152.5°	590.5	590.8	591.1	591.3	591.5	591.7	591.8	591.9	592.0	592.1	592.4
155°	612.8	612.8	612.8	612.8	612.8	612.7	612.7	612.6	612.5	612.3	612.7
157.5°	631.8	631.5	631.3	631.1	630.9	630.7	630.7	630.7	630.7	630.7	631.0
160°	642.9	642.8	642.7	642.6	642.4	642.3	642.2	642.2	642.0	641.9	642.2
162.5°	653.3	653.0	652.6	652.3	652.1	651.8	651.7	651.6	651.5	651.3	652.0
165°	667.1	666.8	666.4	666.1	665.7	665.4	665.2	665.0	664.7	664.5	665.2
167.5°	677.8	677.3	676.7	676.3	675.8	675.5	675.5	675.6	675.6	675.6	676.4
170°	683.8	683.2	682.6	682.0	681.4	681.2	681.3	681.4	681.6	681.6	682.4
172.5°	688.1	687.6	687.1	686.6	686.1	685.9	685.9	685.9	685.9	686.0	686.7
175°	694.0	693.4	692.9	692.2	691.6	691.3	691.2	691.1	690.9	690.8	691.6
177.5°	696.0	695.5	695.0	694.6	694.0	693.8	693.8	693.8	693.8	693.8	694.5
180°	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	652.7	653.6	654.5	654.9	654.8	654.6	654.5	654.4
5°	651.0	652.2	653.6	654.1	654.0	653.8	653.7	653.5
7.5°	647.5	648.9	650.4	651.1	650.9	650.7	650.5	650.4
10°	643.9	645.5	646.9	647.5	647.4	647.2	647.1	646.9
12.5°	639.0	640.4	641.7	642.3	642.3	642.2	642.2	642.2
15°	630.0	631.5	632.9	633.6	633.5	633.3	633.1	632.9
17.5°	619.1	620.6	622.1	622.7	622.6	622.5	622.4	622.3
20°	610.6	612.2	613.8	614.6	614.6	614.6	614.6	614.6
22.5°	600.6	602.2	603.8	604.8	605.0	605.3	605.6	605.9
25°	585.2	587.0	588.8	589.7	589.9	590.1	590.2	590.4
27.5°	568.0	569.6	571.3	572.2	572.4	572.6	572.8	573.0
30°	555.9	557.7	559.5	560.5	560.8	561.2	561.5	561.8
32.5°	543.5	545.5	547.6	548.7	549.1	549.4	549.8	550.1
35°	523.9	526.1	528.4	529.8	530.3	530.7	531.2	531.8
37.5°	503.4	505.7	508.0	509.4	509.9	510.5	511.0	511.5
40°	489.0	491.4	493.9	495.4	496.1	496.7	497.4	498.0
42.5°	474.9	477.5	480.2	481.8	482.4	482.9	483.4	483.9
45°	453.0	455.7	458.5	460.2	461.1	461.9	462.7	463.5
47.5°	429.8	432.7	435.5	437.4	438.5	439.4	440.5	441.4
50°	413.6	416.9	420.1	422.3	423.2	424.1	425.2	426.1
52.5°	397.2	400.4	403.7	405.8	406.8	407.7	408.7	409.7
55°	372.5	375.8	379.0	381.2	382.1	383.1	384.1	385.0
57.5°	346.6	350.5	354.4	356.8	357.7	358.5	359.5	360.4
60°	328.8	332.5	336.2	338.7	340.1	341.4	342.7	344.0
62.5°	311.1	314.9	318.7	321.1	322.4	323.8	325.1	326.4
65°	283.9	288.0	292.1	294.7	296.1	297.4	298.7	300.0
67.5°	257.2	261.4	265.5	268.2	269.5	270.7	272.0	273.2
70°	238.4	242.8	247.1	250.0	251.1	252.2	253.4	254.5
72.5°	220.5	224.8	229.0	231.8	233.1	234.3	235.6	236.9
75°	193.2	197.7	202.4	205.4	206.8	208.3	209.8	211.2
77.5°	167.9	172.5	177.1	180.2	181.7	183.3	184.8	186.4
80°	151.4	156.2	161.1	164.2	165.5	166.8	168.1	169.5
82.5°	135.2	140.2	145.2	148.5	149.9	151.3	152.7	154.2
85°	112.4	117.3	122.2	125.5	127.1	128.8	130.4	132.1
87.5°	95.9	100.8	105.6	108.8	110.3	111.8	113.2	114.7
90°	95.3	100.8	106.2	109.7	111.2	112.8	114.3	115.8
92.5°	100.5	105.5	110.5	113.8	115.2	116.6	118.1	119.5
95°	114.1	118.9	123.7	126.8	128.3	129.8	131.2	132.7
97.5°	133.3	138.0	142.7	145.7	147.1	148.5	150.0	151.4
100°	147.2	151.9	156.6	159.5	160.6	161.7	162.9	164.0
102.5°	162.3	166.9	171.5	174.6	175.9	177.3	178.6	180.0
105°	185.2	189.6	194.1	197.1	198.8	200.5	202.1	203.8
107.5°	210.8	215.1	219.4	222.3	223.4	224.5	225.6	226.8
110°	227.8	231.4	234.9	237.4	239.1	240.7	242.4	244.1



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CATALOG NUMBER: S124DIP-S575D590U830-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	246.1	249.7	253.3	255.7	257.1	258.4	259.9	261.2
115°	274.8	278.1	281.6	283.9	284.9	286.0	286.9	287.9
117.5°	301.7	304.7	307.6	309.7	310.8	311.8	312.9	314.0
120°	320.1	322.7	325.4	327.5	329.0	330.5	332.2	333.7
122.5°	339.0	341.9	344.7	346.5	347.2	348.0	348.7	349.5
125°	367.1	369.9	372.8	374.6	375.3	376.1	376.8	377.6
127.5°	392.9	395.7	398.4	400.2	401.1	402.0	402.9	403.9
130°	411.6	414.2	417.0	418.6	419.1	419.5	420.1	420.6
132.5°	429.1	431.7	434.3	435.9	436.8	437.5	438.4	439.1
135°	454.9	457.2	459.6	461.1	461.7	462.3	463.0	463.5
137.5°	480.3	482.4	484.5	486.0	486.8	487.7	488.6	489.5
140°	497.4	499.4	501.3	502.7	503.4	504.1	504.8	505.5
142.5°	513.9	515.8	517.6	518.9	519.5	520.2	520.8	521.5
145°	539.3	540.2	541.0	541.6	541.9	542.2	542.4	542.7
147.5°	562.5	562.5	562.5	562.8	563.2	563.5	564.0	564.4
150°	577.9	577.9	577.9	577.9	577.7	577.6	577.5	577.4
152.5°	592.7	593.0	593.2	593.2	593.0	592.6	592.3	592.0
155°	613.2	613.7	614.3	614.3	613.7	613.2	612.7	612.3
157.5°	631.4	631.8	632.2	632.1	631.7	631.3	630.8	630.5
160°	642.6	642.9	643.3	643.2	642.6	642.0	641.4	640.8
162.5°	652.6	653.3	653.9	653.9	653.4	652.7	652.1	651.6
165°	665.9	666.6	667.3	667.4	666.9	666.5	666.0	665.5
167.5°	677.0	677.8	678.5	678.4	677.8	677.0	676.3	675.5
170°	683.1	683.8	684.5	684.5	683.6	682.8	681.9	681.1
172.5°	687.6	688.4	689.2	689.2	688.3	687.5	686.6	685.9
175°	692.5	693.3	694.1	694.1	693.3	692.5	691.6	690.8
177.5°	695.1	695.8	696.4	696.4	695.7	694.9	694.1	693.3
180°	695.1	695.1	695.1	695.1	695.1	695.1	695.1	695.1

(END OF REPORT)