

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: P332592-940

Luminaire Tested: **S124DIP-S795D590U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332592-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S795D590U940-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4993.0 lumens  
Efficiency: N/A  
Efficacy: 123.9 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

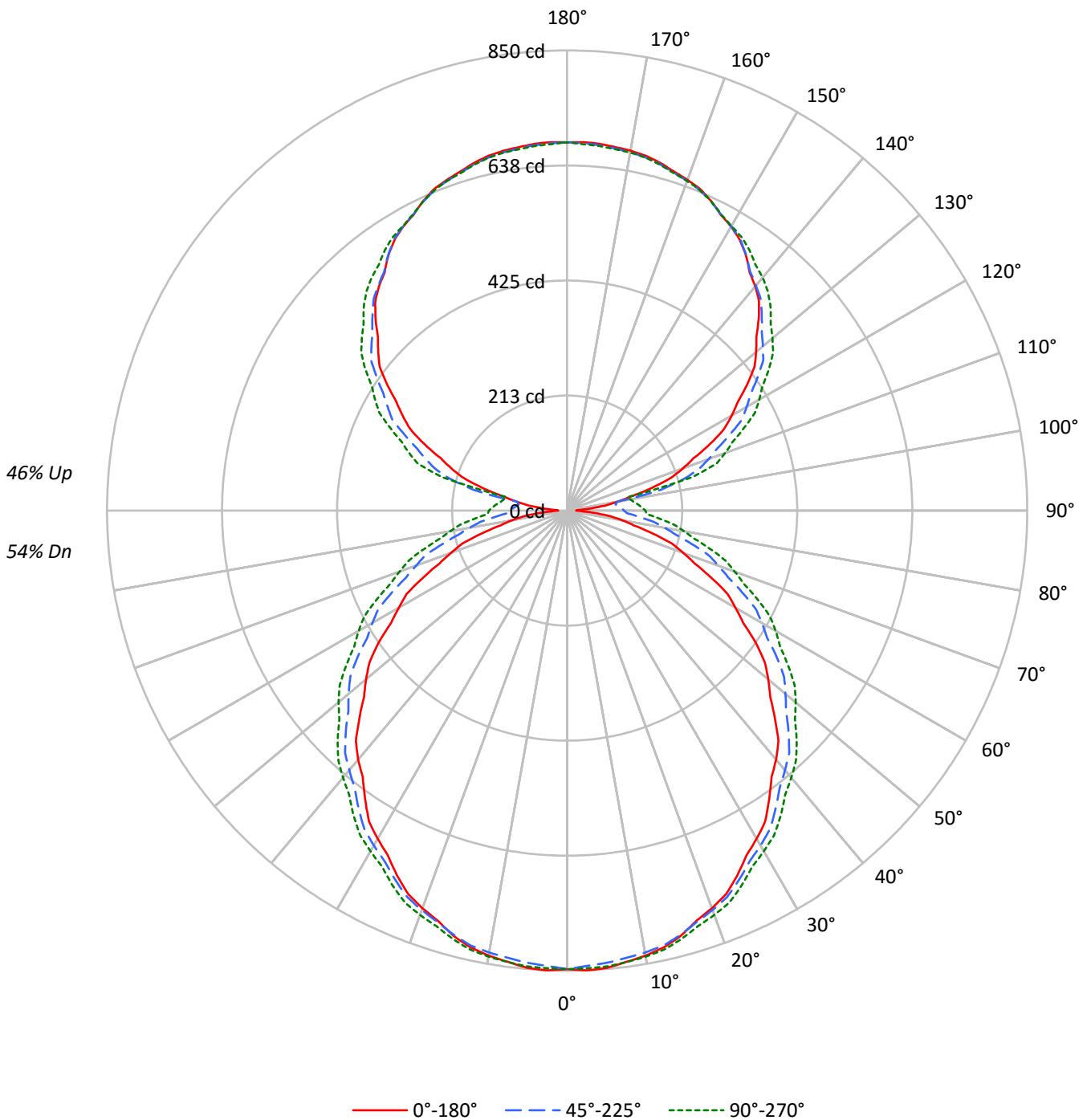
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	54
1	97	93	88	84	90	86	82	79	73	70	68	61	59	58	51	49	48	43
2	88	80	74	68	81	74	69	64	63	59	55	53	50	47	44	42	40	35
3	80	70	62	56	74	65	58	53	56	50	46	47	43	39	39	36	33	29
4	73	62	54	47	67	57	50	44	49	43	39	41	37	33	34	31	28	25
5	67	55	46	40	62	51	44	38	44	38	33	37	32	29	31	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	29	25	28	24	21	18
7	57	44	36	30	53	41	34	29	36	30	25	30	26	22	25	22	19	16
8	53	40	32	27	49	38	30	25	32	27	22	28	23	20	23	20	17	14
9	49	37	29	24	45	34	27	22	30	24	20	25	21	18	21	18	15	13
10	46	34	26	21	43	31	25	20	27	22	18	23	19	16	20	16	14	12

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6838	6838	6838
5°	6859	6683	6702
10°	6817	6573	6568
15°	6756	6446	6411
20°	6664	6307	6259
25°	6560	6151	6092
30°	6448	5995	5919
35°	6321	5835	5768
40°	6219	5684	5610
45°	6067	5543	5475
50°	5939	5383	5333
55°	5808	5231	5164
60°	5601	5036	5013
65°	5376	4829	4824
70°	5101	4592	4605
75°	4723	4331	4407
80°	4295	4081	4213
85°	3763	3857	4101



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.2	1.6
10°-20°	229.8	4.6
20°-30°	347.5	7.0
30°-40°	420.4	8.4
40°-50°	444.5	8.9
50°-60°	418.3	8.4
60°-70°	347.1	7.0
70°-80°	243.8	4.9
80°-90°	139.8	2.8
90°-100°	105.1	2.1
100°-110°	208.9	4.2
110°-120°	324.4	6.5
120°-130°	383.1	7.7
130°-140°	395.2	7.9
140°-150°	362.3	7.3
150°-160°	290.6	5.8
160°-170°	187.4	3.8
170°-180°	64.6	1.3
0°-30°	657.5	13.2
0°-40°	1077.9	21.6
0°-60°	1940.7	38.9
0°-90°	2671.4	53.5
90°-120°	638.3	12.8
90°-150°	1779.0	35.6
90°-180°	2322.0	46.5
0°-180°	4993.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	847	847	847	847	847	
5°	848	845	838	846	845	80
15°	813	814	811	819	818	229
25°	744	749	752	762	764	342
35°	651	662	672	684	688	407
45°	542	561	578	594	599	419
55°	425	445	473	492	498	378
65°	294	324	357	379	388	291
75°	163	198	238	264	273	174
85°	50	90	133	160	171	54
90°	17	60	105	134	144	11
95°	40	56	94	121	131	46
105°	162	185	221	247	239	170
115°	292	303	331	352	360	287
125°	406	408	429	448	455	362
135°	500	500	508	524	532	386
145°	576	576	576	582	587	360
155°	630	631	629	631	630	291
165°	665	662	662	666	662	188
175°	680	677	678	682	676	65
180°	680	680	680	680	680	



TEST NUMBER: P332592-940

CATALOG NUMBER: S124DIP-S795D590U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0
2.5°	850.1	849.5	849.0	848.6	848.0	847.1	845.7	844.4	843.0	841.7	842.8
5°	847.9	847.3	846.7	846.1	845.4	844.4	842.8	841.4	839.9	838.5	840.2
7.5°	840.7	840.3	840.0	839.6	839.2	838.4	837.2	836.0	834.7	833.6	835.4
10°	834.6	834.5	834.3	834.0	833.8	833.2	832.1	831.1	830.0	828.9	830.9
12.5°	826.3	826.3	826.3	826.2	826.2	825.8	825.1	824.3	823.6	822.9	824.7
15°	812.9	813.1	813.2	813.5	813.7	813.5	812.9	812.3	811.5	810.9	812.9
17.5°	794.4	795.0	795.7	796.4	797.0	797.2	797.1	797.0	796.8	796.7	798.7
20°	781.6	782.2	782.8	783.5	784.1	784.5	784.7	784.9	785.2	785.3	787.5
22.5°	767.1	767.9	768.7	769.5	770.3	771.0	771.3	771.7	772.0	772.5	774.5
25°	743.6	744.8	746.2	747.4	748.7	749.7	750.3	750.9	751.5	752.2	754.5
27.5°	717.5	719.3	721.1	723.0	724.9	726.3	727.3	728.2	729.2	730.1	732.3
30°	700.0	701.7	703.4	705.1	706.8	708.3	709.8	711.2	712.7	714.2	716.5
32.5°	681.0	683.1	685.1	687.1	689.1	690.9	692.6	694.2	695.9	697.5	700.2
35°	650.7	653.2	655.8	658.3	660.8	663.1	665.2	667.4	669.4	671.5	674.5
37.5°	620.1	623.0	626.0	628.8	631.8	634.5	637.1	639.7	642.4	645.0	648.0
40°	600.4	603.2	605.8	608.6	611.4	614.2	617.2	620.1	623.0	626.0	629.2
42.5°	577.7	580.7	583.8	586.8	590.0	593.2	596.6	600.1	603.6	607.0	610.6
45°	542.5	546.5	550.5	554.6	558.6	562.6	566.6	570.6	574.5	578.5	582.2
47.5°	509.0	513.1	517.2	521.4	525.5	529.9	534.5	539.1	543.8	548.4	552.1
50°	484.6	489.3	493.9	498.6	503.2	507.8	512.5	517.1	521.7	526.4	530.7
52.5°	460.4	465.0	469.7	474.3	478.9	483.9	489.2	494.5	499.9	505.2	509.3
55°	424.9	429.4	433.8	438.2	442.6	448.0	454.3	460.7	467.0	473.3	477.5
57.5°	385.3	390.7	396.3	401.7	407.2	413.0	419.4	425.6	431.9	438.2	443.2
60°	359.4	365.0	370.4	375.9	381.4	387.6	394.6	401.5	408.5	415.4	420.3
62.5°	334.4	340.5	346.4	352.4	358.4	364.9	371.8	378.8	385.8	392.7	397.5
65°	294.0	300.8	307.6	314.2	321.0	328.0	335.1	342.3	349.5	356.6	361.9
67.5°	255.1	262.3	269.5	276.6	283.8	291.2	298.9	306.6	314.2	321.9	327.3
70°	228.5	235.8	242.9	250.1	257.3	264.8	272.9	280.9	288.8	296.9	302.6
72.5°	202.8	210.1	217.5	224.8	232.1	240.0	248.6	257.1	265.6	274.1	279.6
75°	163.2	170.9	178.7	186.5	194.3	202.7	211.5	220.3	229.3	238.1	244.0
77.5°	126.2	134.4	142.7	151.0	159.2	168.0	177.3	186.5	195.8	205.1	211.1
80°	103.3	111.8	120.2	128.7	137.1	146.0	155.2	164.5	173.8	183.1	189.4
82.5°	80.6	89.3	98.2	106.9	115.7	124.8	134.0	143.3	152.6	161.8	168.3
85°	50.3	59.1	67.9	76.9	85.7	94.9	104.3	113.8	123.3	132.8	139.1
87.5°	28.4	37.2	46.1	54.9	63.8	72.9	82.3	91.8	101.1	110.6	116.8
90°	16.7	26.4	36.0	45.7	55.4	65.2	75.2	85.2	95.1	105.1	111.9
92.5°	20.9	28.4	36.1	43.8	51.5	60.3	70.3	80.2	90.2	100.1	106.7
95°	40.3	43.4	46.5	49.7	52.8	58.7	67.4	76.2	85.0	93.7	100.0
97.5°	70.6	79.0	87.4	95.8	104.2	106.3	102.3	98.2	94.2	90.1	95.7
100°	93.9	101.4	108.9	116.4	123.9	123.9	116.6	109.2	101.8	94.4	98.3
102.5°	120.7	127.0	133.3	139.6	145.9	152.0	158.1	164.1	170.1	176.1	161.0
105°	161.7	166.6	171.4	176.3	181.2	187.9	196.2	204.6	212.9	221.3	227.6
107.5°	201.3	205.0	208.8	212.6	216.4	222.4	230.5	238.7	246.8	254.9	260.6
110°	227.3	230.6	233.9	237.2	240.5	246.2	254.2	262.3	270.4	278.4	283.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	252.6	255.8	259.0	262.3	265.6	270.8	278.1	285.5	292.8	300.2	304.9
115°	291.6	293.8	296.0	298.3	300.5	305.0	311.6	318.2	324.9	331.4	336.4
117.5°	327.4	329.0	330.6	332.3	333.9	337.9	344.5	351.0	357.5	364.0	368.4
120°	351.2	352.2	353.3	354.4	355.4	359.0	365.0	371.0	377.0	383.0	387.4
122.5°	373.9	374.3	374.7	375.1	375.5	378.7	384.6	390.6	396.5	402.4	406.8
125°	405.6	405.9	406.1	406.4	406.6	409.2	414.3	419.3	424.4	429.4	433.7
127.5°	436.4	436.3	436.1	436.0	436.0	438.2	442.7	447.4	451.9	456.5	460.2
130°	455.6	455.5	455.4	455.2	455.1	457.0	460.7	464.4	468.1	471.8	475.7
132.5°	473.9	473.9	473.9	473.9	473.9	475.4	478.5	481.6	484.7	487.9	491.6
135°	500.3	500.2	500.2	500.1	499.9	500.9	502.7	504.7	506.6	508.5	512.1
137.5°	524.7	524.5	524.3	524.2	524.1	524.6	525.8	527.0	528.2	529.4	532.7
140°	540.6	540.6	540.6	540.6	540.6	540.8	541.3	541.7	542.2	542.6	545.6
142.5°	554.0	554.4	554.7	555.2	555.5	555.7	555.7	555.7	555.7	555.7	558.4
145°	575.7	575.9	576.0	576.1	576.2	576.3	576.3	576.3	576.3	576.3	577.7
147.5°	593.2	593.5	594.0	594.4	594.8	594.9	594.9	594.8	594.6	594.5	594.8
150°	605.7	606.0	606.2	606.5	606.7	606.8	606.6	606.5	606.5	606.3	606.3
152.5°	615.5	615.9	616.2	616.5	616.8	616.9	616.7	616.5	616.3	616.1	616.3
155°	630.3	630.4	630.4	630.5	630.7	630.5	630.3	629.9	629.5	629.2	629.6
157.5°	642.7	642.7	642.6	642.6	642.5	642.2	641.9	641.5	641.1	640.7	641.3
160°	650.1	649.7	649.3	649.1	648.7	648.5	648.4	648.3	648.1	648.0	648.7
162.5°	656.6	656.1	655.7	655.3	654.9	654.6	654.4	654.3	654.2	654.2	654.8
165°	664.8	664.2	663.7	663.1	662.5	662.3	662.3	662.3	662.3	662.3	663.2
167.5°	671.3	670.7	670.1	669.6	669.0	668.6	668.6	668.5	668.4	668.3	669.4
170°	675.0	674.3	673.6	673.0	672.3	672.0	672.1	672.2	672.3	672.4	673.3
172.5°	677.4	676.7	676.1	675.4	674.8	674.4	674.6	674.7	674.8	674.8	675.8
175°	680.1	679.4	678.7	678.1	677.3	677.1	677.2	677.3	677.4	677.5	678.5
177.5°	681.3	680.6	680.0	679.4	678.8	678.5	678.7	678.9	679.0	679.2	680.0
180°	680.1	680.1	680.1	680.1	680.1	680.1	680.1	680.1	680.1	680.1	680.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0
2.5°	844.0	845.3	846.4	846.9	846.8	846.6	846.4	846.2
5°	841.9	843.6	845.2	846.0	845.7	845.5	845.3	845.1
7.5°	837.3	839.2	841.2	842.0	841.8	841.5	841.3	841.2
10°	832.8	834.6	836.6	837.4	837.2	837.0	836.8	836.6
12.5°	826.3	828.1	829.8	830.6	830.6	830.5	830.5	830.5
15°	814.8	816.6	818.5	819.4	819.2	818.9	818.8	818.5
17.5°	800.6	802.5	804.5	805.4	805.2	805.0	804.9	804.7
20°	789.5	791.7	793.8	794.9	794.9	794.9	794.9	794.9
22.5°	776.7	778.7	780.9	782.1	782.5	782.7	783.1	783.5
25°	756.8	759.1	761.4	762.7	762.9	763.1	763.3	763.6
27.5°	734.4	736.6	738.8	739.9	740.2	740.5	740.7	740.9
30°	718.8	721.1	723.4	724.9	725.3	725.7	726.1	726.6
32.5°	702.8	705.5	708.1	709.7	710.1	710.5	711.0	711.4
35°	677.4	680.4	683.3	685.1	685.7	686.3	687.1	687.7
37.5°	650.9	654.0	656.9	658.8	659.4	660.1	660.8	661.5
40°	632.3	635.5	638.6	640.6	641.5	642.3	643.2	644.0
42.5°	614.0	617.5	621.0	623.1	623.8	624.5	625.2	625.8
45°	585.8	589.3	592.9	595.2	596.3	597.4	598.4	599.4
47.5°	555.8	559.5	563.3	565.7	567.0	568.3	569.5	570.8
50°	534.8	539.0	543.2	546.0	547.2	548.6	549.8	551.1
52.5°	513.6	517.8	522.0	524.8	526.0	527.3	528.5	529.9
55°	481.7	486.0	490.2	492.9	494.2	495.4	496.7	497.9
57.5°	448.3	453.3	458.3	461.4	462.5	463.7	464.9	466.1
60°	425.2	430.0	434.8	438.1	439.8	441.5	443.2	444.9
62.5°	402.3	407.2	412.1	415.4	417.1	418.7	420.4	422.0
65°	367.2	372.5	377.7	381.2	382.9	384.6	386.2	387.9
67.5°	332.6	338.0	343.3	346.8	348.5	350.1	351.8	353.4
70°	308.3	314.0	319.7	323.2	324.7	326.2	327.6	329.1
72.5°	285.2	290.7	296.2	299.8	301.4	303.1	304.7	306.4
75°	249.9	255.7	261.7	265.6	267.5	269.4	271.3	273.1
77.5°	217.0	223.0	229.0	233.0	235.1	237.0	239.1	241.1
80°	195.7	202.1	208.4	212.3	214.0	215.7	217.4	219.1
82.5°	174.8	181.3	187.8	192.0	193.8	195.6	197.5	199.4
85°	145.4	151.8	158.1	162.3	164.4	166.5	168.6	170.8
87.5°	123.1	129.3	135.5	139.6	141.5	143.4	145.3	147.2
90°	118.7	125.5	132.2	136.6	138.5	140.4	142.3	144.3
92.5°	113.3	120.0	126.6	130.8	132.5	134.3	136.0	137.7
95°	106.5	112.8	119.2	123.4	125.4	127.4	129.4	131.4
97.5°	101.2	106.8	112.4	116.2	118.2	120.0	122.0	123.9
100°	102.0	105.8	109.5	112.3	113.8	115.4	117.0	118.6
102.5°	145.7	130.5	115.3	108.5	110.2	111.8	113.5	115.2
105°	233.9	240.1	246.5	248.4	246.0	243.6	241.2	238.9
107.5°	266.4	272.0	277.7	281.5	283.5	285.4	287.3	289.3
110°	288.6	293.6	298.6	302.2	304.3	306.3	308.3	310.3





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CATALOG NUMBER: S124DIP-S795D590U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	309.5	314.1	318.8	322.2	324.2	326.4	328.5	330.6
115°	341.2	346.1	350.9	354.1	355.5	357.0	358.5	360.0
117.5°	372.7	377.0	381.4	384.3	386.0	387.6	389.3	390.9
120°	391.9	396.4	400.8	403.8	405.2	406.6	408.1	409.6
122.5°	411.1	415.4	419.8	422.7	423.9	425.3	426.5	427.8
125°	438.1	442.5	446.7	449.7	451.0	452.4	453.8	455.1
127.5°	464.0	467.6	471.4	473.9	475.3	476.6	478.0	479.3
130°	479.7	483.6	487.4	490.0	491.3	492.6	493.8	495.1
132.5°	495.3	499.1	502.8	505.3	506.5	507.7	508.8	510.0
135°	515.8	519.3	522.9	525.5	527.0	528.4	529.9	531.5
137.5°	536.1	539.4	542.7	544.8	545.8	546.9	547.9	548.8
140°	548.8	551.8	554.9	557.1	558.2	559.4	560.5	561.7
142.5°	561.1	563.7	566.3	568.1	569.0	569.9	570.9	571.8
145°	579.1	580.4	581.8	583.0	584.1	585.1	586.2	587.3
147.5°	595.0	595.3	595.6	596.1	596.8	597.6	598.4	599.2
150°	606.3	606.3	606.3	606.4	606.5	606.6	606.7	606.8
152.5°	616.4	616.6	616.8	616.9	616.8	616.7	616.6	616.6
155°	630.1	630.5	631.0	631.1	630.7	630.4	630.1	629.7
157.5°	641.9	642.5	643.0	643.0	642.5	641.9	641.3	640.7
160°	649.3	650.1	650.8	650.8	650.1	649.3	648.7	648.0
162.5°	655.5	656.1	656.8	656.8	656.0	655.2	654.5	653.7
165°	664.1	664.9	665.9	665.8	664.8	663.8	662.8	661.7
167.5°	670.4	671.4	672.3	672.3	671.2	670.0	668.9	667.8
170°	674.2	675.1	676.1	675.9	674.8	673.7	672.5	671.5
172.5°	676.7	677.6	678.5	678.3	677.2	675.9	674.7	673.4
175°	679.6	680.6	681.6	681.4	680.1	678.7	677.3	676.0
177.5°	680.7	681.4	682.2	682.0	680.9	679.8	678.7	677.6
180°	680.1	680.1	680.1	680.1	680.1	680.1	680.1	680.1

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