

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: P331970-927

Luminaire Tested: **S123DIP-S775D585U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331970-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S775D585U927-4F0-1E-UDD-F  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 585 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4366.5 lumens  
Efficiency: N/A  
Efficacy: 108.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: General Diffuse

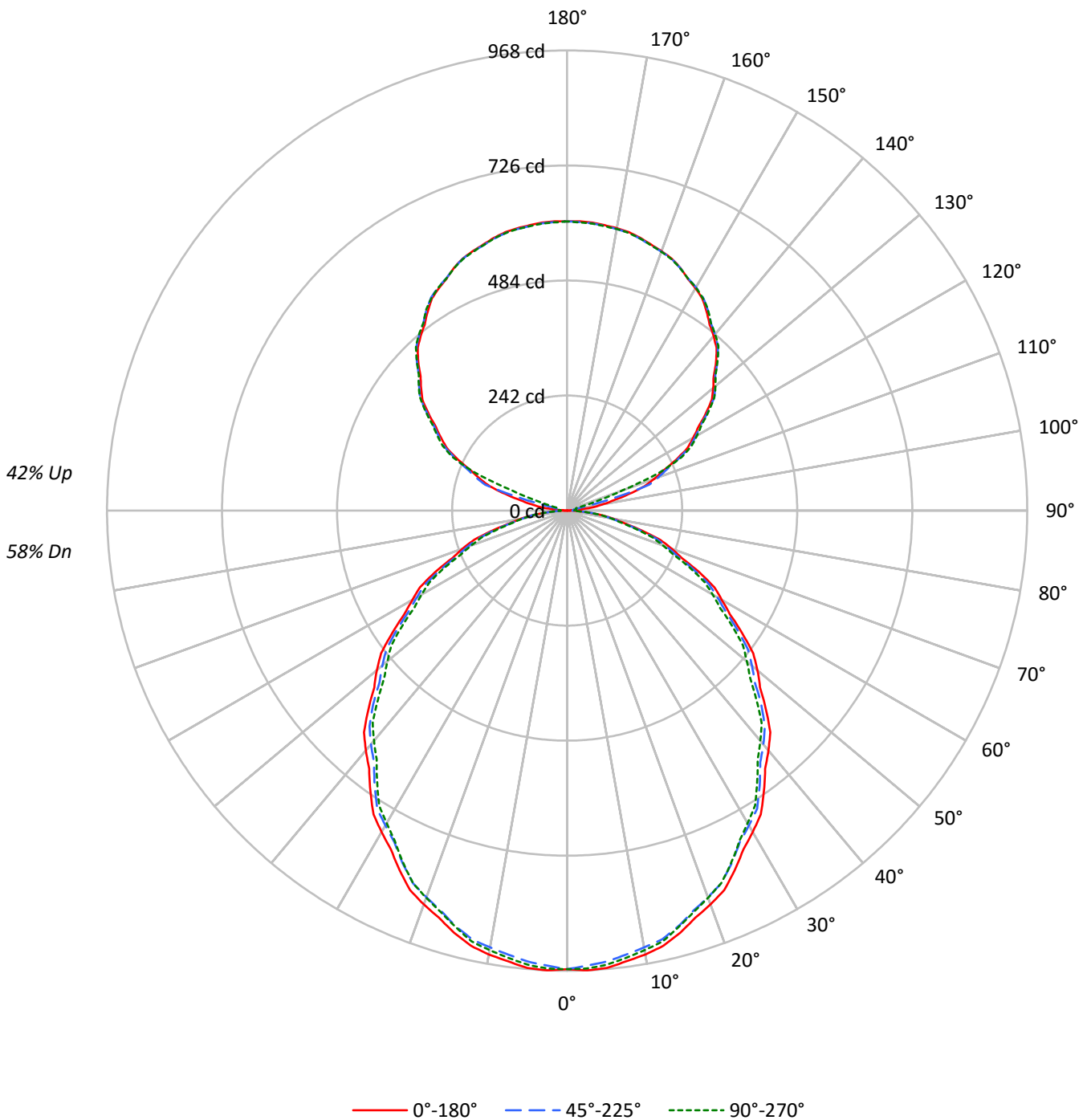
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0													
RCR																																					
0	109	109	109	109	101	101	101	101	88	88	88	75	75	75	63	63	63	58																			
1	99	95	91	87	92	89	85	82	77	74	72	66	64	62	56	54	53	48																			
2	90	83	77	71	84	77	72	67	67	63	59	58	55	52	49	47	45	40																			
3	83	73	65	59	77	68	62	56	59	54	50	51	47	44	43	40	38	34																			
4	76	65	56	50	70	60	53	48	53	47	43	45	41	38	39	35	33	29																			
5	69	58	49	43	64	54	47	41	47	41	37	41	36	33	35	31	28	25																			
6	64	52	43	37	59	48	41	36	42	37	32	37	32	29	32	28	25	22																			
7	59	47	39	33	55	44	37	31	39	33	28	34	29	25	29	25	22	20																			
8	55	42	35	29	51	40	33	28	35	29	25	31	26	23	27	23	20	18																			
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	25	21	18	16																			
10	48	36	28	23	45	34	27	22	30	24	20	26	22	18	23	19	16	14																			

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

	0°	45°	90°
0°	10384	10384	10384
5°	10432	10289	10361
10°	10363	10200	10263
15°	10242	10085	10104
20°	10100	9919	9929
25°	9911	9723	9704
30°	9701	9506	9434
35°	9483	9276	9155
40°	9254	9021	8882
45°	9003	8788	8573
50°	8751	8500	8264
55°	8422	8203	7955
60°	8088	7858	7608
65°	7796	7480	7246
70°	7361	7046	6735
75°	6729	6488	6209
80°	6069	5808	5759
85°	5323	5125	4915



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.9	2.1
10°-20°	256.6	5.9
20°-30°	379.0	8.7
30°-40°	442.7	10.1
40°-50°	445.1	10.2
50°-60°	391.0	9.0
60°-70°	291.3	6.7
70°-80°	166.0	3.8
80°-90°	49.3	1.1
90°-100°	22.1	0.5
100°-110°	105.4	2.4
110°-120°	253.1	5.8
120°-130°	322.3	7.4
130°-140°	344.4	7.9
140°-150°	322.0	7.4
150°-160°	259.8	5.9
160°-170°	167.7	3.8
170°-180°	57.8	1.3
0°-30°	726.5	16.6
0°-40°	1169.2	26.8
0°-60°	2005.3	45.9
0°-90°	2511.9	57.5
90°-120°	380.6	8.7
90°-150°	1369.4	31.4
90°-180°	1855.0	42.5
0°-180°	4366.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	965	965	965	965	965	
5°	966	961	952	960	959	91
15°	919	915	905	911	907	259
25°	834	829	819	819	817	384
35°	722	716	706	701	697	451
45°	591	588	577	568	563	456
55°	449	447	437	428	424	402
65°	306	302	294	287	284	302
75°	162	158	156	152	149	173
85°	43	42	42	40	40	47
90°	0	5	11	13	14	4
95°	28	10	14	17	17	34
105°	135	137	99	24	20	143
115°	252	255	259	264	266	249
125°	356	360	362	362	363	318
135°	443	446	448	449	448	341
145°	511	515	516	516	516	320
155°	563	563	563	565	562	259
165°	594	593	592	596	593	168
175°	608	606	606	609	606	58
180°	608	608	608	608	608	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7
2.5°	968.0	967.4	966.9	966.2	965.7	964.6	962.9	961.3	959.6	958.1	959.5
5°	965.5	964.6	963.7	962.7	961.8	960.4	958.3	956.3	954.3	952.2	954.1
7.5°	956.1	955.1	954.2	953.3	952.4	950.9	948.7	946.7	944.5	942.5	944.1
10°	948.1	947.1	946.3	945.3	944.4	942.8	940.3	937.9	935.6	933.2	934.9
12.5°	937.5	936.7	936.0	935.2	934.4	932.9	930.7	928.4	926.1	923.8	925.1
15°	919.1	918.3	917.6	916.9	916.1	914.6	912.1	909.7	907.4	905.0	906.4
17.5°	897.6	896.7	895.7	894.8	893.8	892.2	889.8	887.3	884.9	882.6	883.6
20°	881.7	880.6	879.6	878.5	877.3	875.5	873.1	870.8	868.4	865.9	866.7
22.5°	863.8	862.7	861.6	860.5	859.4	857.6	855.2	852.9	850.5	848.0	848.7
25°	834.5	833.4	832.3	831.2	830.0	828.3	825.9	823.5	821.1	818.7	818.9
27.5°	803.1	802.0	801.0	799.9	798.8	797.0	794.4	791.9	789.3	786.6	786.8
30°	780.5	779.6	778.7	777.8	776.8	775.1	772.5	769.9	767.4	764.8	764.8
32.5°	758.0	756.8	755.5	754.3	753.1	751.5	749.5	747.5	745.5	743.5	742.5
35°	721.7	720.6	719.5	718.4	717.2	715.5	713.0	710.7	708.3	705.9	704.8
37.5°	684.4	683.1	681.7	680.2	678.9	677.0	674.5	672.1	669.6	667.3	665.9
40°	658.6	657.5	656.4	655.3	654.2	652.4	649.7	647.2	644.6	642.0	640.6
42.5°	632.7	631.4	630.2	629.0	627.7	625.8	623.2	620.6	618.1	615.4	614.0
45°	591.4	590.7	589.9	589.2	588.4	586.9	584.5	582.1	579.7	577.3	575.1
47.5°	550.4	549.4	548.3	547.2	546.1	544.5	542.2	540.0	537.7	535.5	533.3
50°	522.6	521.7	520.7	519.8	518.9	517.2	514.8	512.5	510.0	507.6	505.6
52.5°	493.4	492.7	492.1	491.5	490.8	489.3	486.7	484.2	481.6	479.1	477.4
55°	448.8	448.5	448.4	448.2	448.0	446.7	444.3	442.0	439.5	437.1	435.1
57.5°	406.3	405.7	405.0	404.4	403.8	402.5	400.6	398.6	396.7	394.8	393.0
60°	375.7	375.6	375.4	375.2	375.0	373.8	371.6	369.4	367.2	365.0	363.3
62.5°	348.6	348.1	347.6	347.1	346.7	345.3	343.1	340.9	338.7	336.4	334.8
65°	306.1	305.1	304.2	303.3	302.4	301.0	299.1	297.3	295.5	293.7	292.2
67.5°	261.1	260.3	259.5	258.6	257.9	256.7	255.4	254.0	252.5	251.2	249.9
70°	233.9	232.8	231.7	230.6	229.5	228.4	227.3	226.2	225.1	223.9	222.7
72.5°	205.4	204.5	203.7	203.0	202.2	201.1	199.9	198.6	197.3	196.1	195.0
75°	161.8	161.0	160.3	159.5	158.8	158.1	157.6	157.0	156.5	156.0	155.0
77.5°	123.1	122.7	122.3	121.9	121.4	121.0	120.3	119.6	119.0	118.3	117.6
80°	97.9	97.4	96.8	96.3	95.7	95.2	94.8	94.5	94.1	93.7	93.6
82.5°	73.4	73.2	73.1	73.0	72.9	72.8	72.7	72.6	72.6	72.5	72.2
85°	43.1	42.8	42.4	42.1	41.7	41.5	41.5	41.5	41.5	41.5	41.1
87.5°	17.3	17.1	16.9	16.6	16.4	16.3	16.4	16.6	16.6	16.8	16.7
90°	0.5	1.4	2.5	3.5	4.4	5.6	6.9	8.2	9.5	10.9	11.2
92.5°	8.4	8.2	7.8	7.5	7.3	7.6	8.6	9.6	10.6	11.6	12.2
95°	27.6	23.4	19.3	15.2	11.1	9.6	10.7	11.8	12.9	14.0	14.7
97.5°	55.4	53.6	51.7	49.8	48.0	43.5	36.2	29.0	21.8	14.6	15.4
100°	76.4	78.3	80.4	82.4	84.4	77.6	61.9	46.3	30.6	14.9	15.7
102.5°	100.2	101.6	103.1	104.6	106.0	98.2	81.0	63.9	46.8	29.7	27.3
105°	134.7	135.8	136.9	137.9	139.0	135.1	126.0	117.0	108.0	98.9	81.2
107.5°	171.0	171.8	172.8	173.6	174.5	175.6	177.1	178.5	179.9	181.3	168.3
110°	195.2	196.0	196.8	197.6	198.4	199.4	200.4	201.5	202.6	203.7	200.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	218.3	219.0	219.8	220.5	221.2	222.1	223.2	224.3	225.5	226.6	226.6
115°	252.5	253.2	253.7	254.4	255.0	255.7	256.7	257.5	258.4	259.4	260.4
117.5°	285.7	286.5	287.2	288.0	288.7	289.3	289.8	290.3	290.7	291.1	292.0
120°	306.3	307.2	308.2	309.0	310.0	310.5	310.9	311.2	311.5	311.7	312.6
122.5°	327.3	328.0	328.8	329.5	330.3	330.8	331.2	331.6	332.0	332.4	333.0
125°	356.0	356.9	357.7	358.5	359.3	359.9	360.3	360.7	361.1	361.5	361.6
127.5°	383.9	384.7	385.5	386.3	387.1	387.7	388.2	388.7	389.2	389.7	390.0
130°	401.2	402.0	402.8	403.6	404.4	405.0	405.4	405.8	406.2	406.6	407.0
132.5°	417.9	418.7	419.5	420.3	421.0	421.6	421.9	422.2	422.6	422.9	423.3
135°	443.2	443.9	444.4	445.0	445.7	446.2	446.6	446.9	447.3	447.7	448.1
137.5°	464.9	465.7	466.4	467.2	467.9	468.5	468.7	468.9	469.1	469.4	469.8
140°	479.3	480.0	480.6	481.2	481.8	482.3	482.5	482.8	483.2	483.5	483.9
142.5°	492.7	493.4	494.0	494.6	495.2	495.6	495.9	496.2	496.5	496.9	497.2
145°	511.4	512.1	512.9	513.6	514.3	514.8	514.9	515.2	515.3	515.6	515.7
147.5°	529.1	529.6	530.0	530.4	530.9	531.2	531.5	531.6	531.9	532.1	532.3
150°	540.0	540.3	540.5	540.8	541.1	541.4	541.6	541.8	542.0	542.2	542.4
152.5°	549.7	549.9	549.9	550.1	550.2	550.4	550.5	550.6	550.7	550.9	551.2
155°	563.4	563.2	563.0	562.8	562.6	562.6	562.7	562.8	562.8	563.0	563.5
157.5°	574.1	574.1	574.0	574.0	574.0	573.9	573.9	573.8	573.6	573.5	574.2
160°	580.6	580.5	580.4	580.3	580.2	580.1	580.0	579.9	579.8	579.7	580.3
162.5°	586.8	586.5	586.2	586.0	585.7	585.5	585.4	585.3	585.2	585.1	585.8
165°	594.1	593.8	593.6	593.3	592.9	592.7	592.6	592.6	592.5	592.3	593.2
167.5°	599.9	599.5	599.1	598.7	598.3	598.1	598.1	598.1	598.1	598.1	599.0
170°	603.2	602.8	602.4	602.0	601.6	601.3	601.3	601.3	601.3	601.3	602.2
172.5°	605.4	604.9	604.4	603.9	603.4	603.2	603.3	603.4	603.5	603.6	604.4
175°	608.2	607.7	607.1	606.7	606.2	605.9	606.0	606.2	606.3	606.3	607.0
177.5°	608.9	608.5	608.1	607.7	607.3	607.1	607.2	607.3	607.4	607.4	608.1
180°	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7
2.5°	961.0	962.5	963.9	964.6	964.5	964.3	964.2	964.0
5°	955.9	957.7	959.6	960.4	960.0	959.6	959.3	958.9
7.5°	945.8	947.5	949.1	949.8	949.6	949.4	949.1	949.0
10°	936.5	938.1	939.8	940.5	940.1	939.7	939.4	939.0
12.5°	926.3	927.5	928.8	929.2	929.0	928.8	928.6	928.4
15°	907.9	909.3	910.9	911.0	909.9	908.8	907.8	906.7
17.5°	884.6	885.7	886.7	887.0	886.6	886.2	885.8	885.4
20°	867.4	868.2	868.9	869.0	868.5	867.9	867.4	866.8
22.5°	849.2	849.9	850.4	850.3	849.7	849.0	848.3	847.6
25°	819.0	819.3	819.4	819.3	818.7	818.2	817.6	817.1
27.5°	787.0	787.1	787.3	787.0	786.3	785.6	784.9	784.2
30°	764.8	764.8	764.8	764.1	762.9	761.5	760.3	759.0
32.5°	741.5	740.5	739.4	738.6	737.8	737.1	736.4	735.8
35°	703.7	702.6	701.5	700.4	699.5	698.6	697.7	696.7
37.5°	664.6	663.2	661.9	661.0	660.4	659.8	659.2	658.6
40°	639.1	637.6	636.1	635.0	634.3	633.5	632.8	632.1
42.5°	612.5	611.0	609.6	608.5	607.8	607.0	606.3	605.5
45°	572.9	570.7	568.5	566.9	566.0	565.1	564.1	563.2
47.5°	531.2	529.0	526.8	525.3	524.5	523.7	522.9	522.0
50°	503.6	501.5	499.6	498.0	496.9	495.7	494.6	493.5
52.5°	475.6	473.9	472.1	470.8	469.7	468.6	467.5	466.4
55°	433.1	431.0	429.0	427.5	426.6	425.7	424.8	423.9
57.5°	391.2	389.4	387.6	386.2	385.1	384.0	382.9	381.9
60°	361.6	360.0	358.3	357.0	356.1	355.2	354.3	353.4
62.5°	333.1	331.4	329.8	328.7	328.0	327.4	326.8	326.1
65°	290.7	289.2	287.7	286.7	286.1	285.6	285.0	284.5
67.5°	248.6	247.3	246.0	244.9	244.2	243.4	242.6	241.9
70°	221.4	220.1	218.8	217.7	216.7	215.9	214.9	214.0
72.5°	193.8	192.7	191.5	190.7	190.2	189.7	189.3	188.8
75°	154.1	153.2	152.3	151.5	151.0	150.4	149.9	149.3
77.5°	117.0	116.4	115.7	115.5	115.5	115.5	115.5	115.5
80°	93.4	93.2	93.0	92.9	92.9	92.9	92.9	92.9
82.5°	71.9	71.5	71.1	70.9	70.8	70.7	70.5	70.3
85°	40.7	40.4	40.0	39.8	39.8	39.8	39.8	39.8
87.5°	16.6	16.6	16.5	16.5	16.6	16.6	16.6	16.6
90°	11.6	12.0	12.4	12.8	13.0	13.2	13.4	13.5
92.5°	12.8	13.5	14.1	14.5	14.7	14.7	14.9	15.0
95°	15.4	16.1	16.8	17.2	17.2	17.2	17.2	17.2
97.5°	16.2	17.0	17.7	18.2	18.3	18.4	18.5	18.6
100°	16.5	17.3	18.1	18.5	18.7	18.8	18.9	19.0
102.5°	24.7	22.3	19.8	18.6	18.8	19.0	19.2	19.3
105°	63.4	45.6	27.9	19.1	19.3	19.5	19.6	19.9
107.5°	155.3	142.3	129.2	116.1	102.6	89.2	75.8	62.4
110°	197.2	193.8	190.5	181.6	167.3	153.0	138.6	124.2





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CATALOG NUMBER: S123DIP-S775D585U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	226.6	226.7	226.8	225.3	222.3	219.2	216.2	213.2
115°	261.3	262.4	263.4	264.0	264.4	264.9	265.3	265.7
117.5°	292.8	293.6	294.4	294.9	294.9	295.0	295.1	295.2
120°	313.4	314.2	315.0	315.4	315.4	315.4	315.4	315.4
122.5°	333.5	334.1	334.6	334.9	335.0	335.1	335.2	335.3
125°	361.9	362.0	362.3	362.5	362.7	362.9	363.1	363.3
127.5°	390.3	390.6	390.9	391.0	390.8	390.6	390.4	390.2
130°	407.4	407.8	408.2	408.4	408.1	408.0	407.7	407.6
132.5°	423.7	424.1	424.5	424.6	424.3	424.0	423.7	423.4
135°	448.4	448.7	448.9	448.9	448.7	448.4	448.1	447.7
137.5°	470.3	470.8	471.3	471.4	471.2	471.0	470.8	470.6
140°	484.3	484.7	485.1	485.1	485.0	484.7	484.6	484.3
142.5°	497.5	497.8	498.1	498.1	497.9	497.6	497.3	497.0
145°	515.9	516.1	516.3	516.4	516.4	516.4	516.4	516.4
147.5°	532.5	532.7	532.9	532.7	532.3	531.8	531.4	530.9
150°	542.6	542.8	543.0	543.0	542.6	542.3	542.0	541.8
152.5°	551.6	551.9	552.3	552.2	551.8	551.4	550.9	550.4
155°	564.0	564.5	565.0	564.9	564.4	563.7	563.2	562.5
157.5°	574.7	575.4	576.0	575.8	575.0	574.3	573.5	572.7
160°	580.9	581.5	582.1	582.0	581.4	580.7	580.0	579.2
162.5°	586.5	587.2	587.9	587.9	587.2	586.6	586.0	585.4
165°	594.0	594.8	595.6	595.6	594.9	594.2	593.5	592.8
167.5°	599.8	600.6	601.3	601.3	600.6	599.8	599.0	598.1
170°	603.0	603.8	604.6	604.6	603.8	603.0	602.2	601.3
172.5°	605.1	605.9	606.7	606.7	605.9	605.0	604.0	603.2
175°	607.8	608.5	609.2	609.1	608.3	607.5	606.7	605.9
177.5°	608.7	609.3	610.0	609.9	609.1	608.3	607.5	606.7
180°	608.2	608.2	608.2	608.2	608.2	608.2	608.2	608.2

(END OF REPORT)