

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: P331970-940

Luminaire Tested: **S123DIP-S775D585U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331970-940  
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-S775D585U940-4F0-1E-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: 4915.1 lumens  
Efficiency: N/A  
Efficacy: 122.0 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

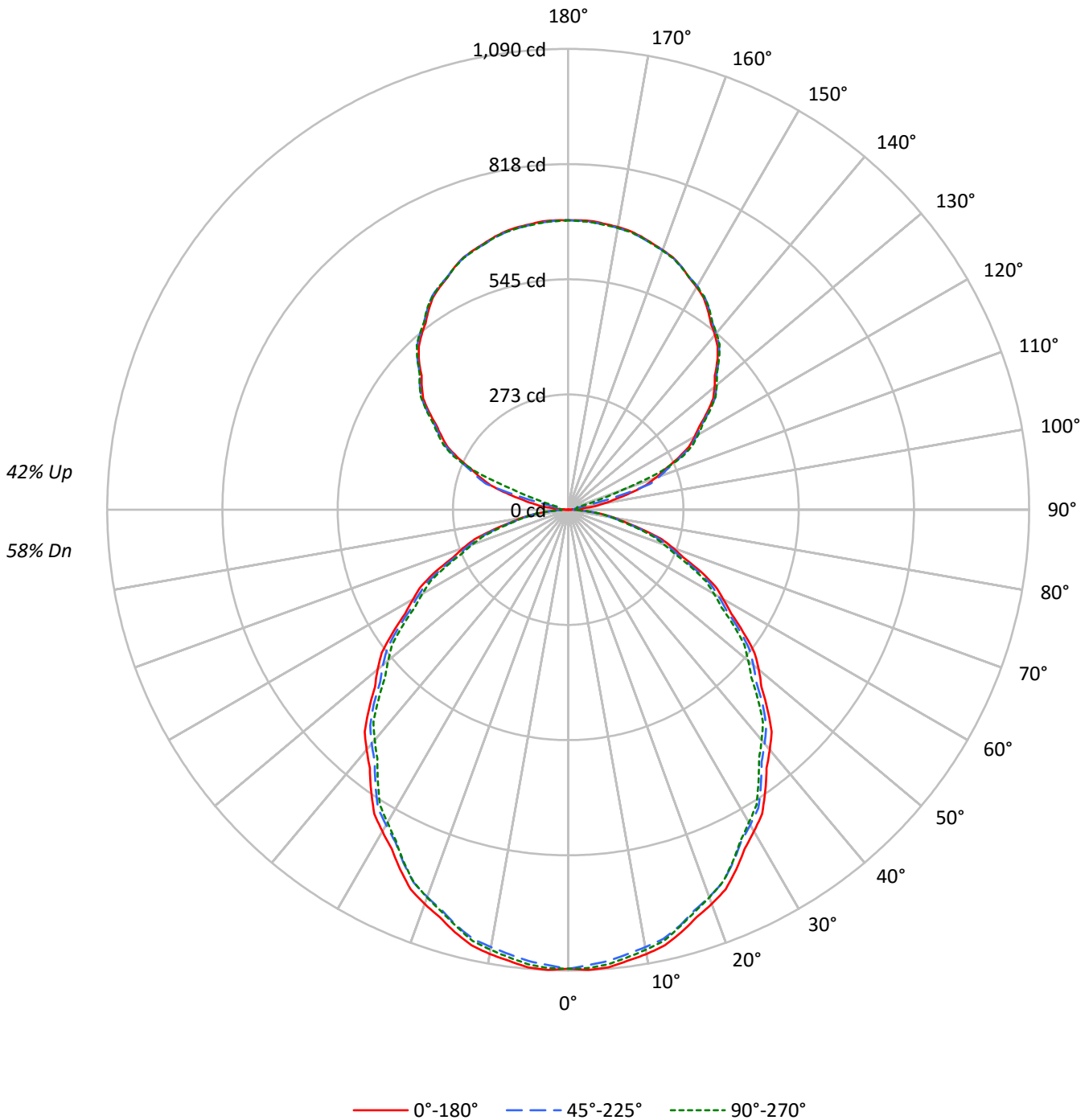
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	11689	11689	11689
5°	11743	11581	11662
10°	11664	11481	11552
15°	11529	11352	11373
20°	11369	11165	11176
25°	11156	10946	10923
30°	10920	10700	10618
35°	10674	10441	10306
40°	10418	10153	9997
45°	10135	9893	9651
50°	9851	9568	9302
55°	9481	9233	8955
60°	9104	8844	8564
65°	8777	8420	8155
70°	8286	7934	7582
75°	7573	7303	6991
80°	6831	6540	6484
85°	5990	5768	5545



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.3	2.1
10°-20°	288.8	5.9
20°-30°	426.6	8.7
30°-40°	498.4	10.1
40°-50°	501.0	10.2
50°-60°	440.1	9.0
60°-70°	327.9	6.7
70°-80°	186.8	3.8
80°-90°	55.5	1.1
90°-100°	24.9	0.5
100°-110°	118.6	2.4
110°-120°	284.9	5.8
120°-130°	362.8	7.4
130°-140°	387.7	7.9
140°-150°	362.5	7.4
150°-160°	292.4	5.9
160°-170°	188.7	3.8
170°-180°	65.0	1.3
0°-30°	817.7	16.6
0°-40°	1316.1	26.8
0°-60°	2257.3	45.9
0°-90°	2827.5	57.5
90°-120°	428.4	8.7
90°-150°	1541.4	31.4
90°-180°	2088.0	42.5
0°-180°	4915.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1087	1082	1072	1081	1079	103
15°	1035	1030	1019	1025	1021	292
25°	939	933	922	922	920	432
35°	812	806	795	789	784	508
45°	666	662	650	639	634	514
55°	505	504	492	482	477	452
65°	345	340	331	323	320	340
75°	182	178	176	171	168	195
85°	48	47	47	45	45	53
90°	0	6	12	14	15	4
95°	31	12	16	19	19	38
105°	152	154	111	26	22	161
115°	284	287	292	297	299	281
125°	401	405	407	408	409	358
135°	499	502	504	505	504	384
145°	576	579	580	581	581	360
155°	634	633	634	636	633	292
165°	669	667	667	670	667	189
175°	685	682	682	686	682	65
180°	685	685	685	685	685	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1089.6	1089.0	1088.3	1087.6	1087.0	1085.7	1083.9	1082.1	1080.2	1078.4	1080.0
5°	1086.8	1085.7	1084.8	1083.7	1082.6	1081.0	1078.7	1076.5	1074.2	1071.8	1074.0
7.5°	1076.2	1075.1	1074.1	1073.1	1072.0	1070.3	1067.9	1065.6	1063.2	1060.9	1062.7
10°	1067.2	1066.1	1065.1	1064.1	1063.1	1061.2	1058.5	1055.8	1053.1	1050.4	1052.3
12.5°	1055.3	1054.4	1053.6	1052.7	1051.8	1050.1	1047.6	1045.0	1042.5	1039.9	1041.3
15°	1034.6	1033.7	1032.9	1032.1	1031.2	1029.5	1026.7	1024.0	1021.4	1018.7	1020.3
17.5°	1010.4	1009.3	1008.3	1007.2	1006.1	1004.2	1001.6	998.8	996.1	993.5	994.6
20°	992.5	991.2	990.1	988.8	987.6	985.5	982.8	980.2	977.5	974.7	975.6
22.5°	972.3	971.1	969.8	968.6	967.3	965.4	962.7	960.0	957.3	954.6	955.3
25°	939.3	938.1	936.8	935.6	934.3	932.4	929.6	926.9	924.3	921.6	921.8
27.5°	904.0	902.8	901.6	900.4	899.2	897.2	894.2	891.4	888.4	885.5	885.6
30°	878.6	877.5	876.6	875.5	874.4	872.4	869.6	866.7	863.8	860.9	860.9
32.5°	853.2	851.9	850.4	849.1	847.7	846.0	843.6	841.4	839.2	837.0	835.8
35°	812.3	811.1	809.9	808.6	807.4	805.4	802.6	800.0	797.3	794.6	793.4
37.5°	770.4	768.9	767.3	765.7	764.2	762.1	759.3	756.5	753.8	751.1	749.6
40°	741.4	740.1	738.9	737.6	736.4	734.3	731.4	728.5	725.6	722.6	721.0
42.5°	712.2	710.8	709.4	708.0	706.6	704.5	701.5	698.6	695.7	692.8	691.2
45°	665.8	664.9	664.1	663.3	662.4	660.7	657.9	655.2	652.6	649.9	647.4
47.5°	619.6	618.4	617.2	616.0	614.7	612.9	610.4	607.9	605.3	602.8	600.3
50°	588.3	587.2	586.1	585.1	584.1	582.2	579.5	576.8	574.1	571.4	569.2
52.5°	555.4	554.6	553.9	553.2	552.5	550.7	547.9	545.0	542.2	539.3	537.3
55°	505.2	504.9	504.7	504.5	504.3	502.8	500.2	497.5	494.7	492.0	489.8
57.5°	457.4	456.6	455.9	455.2	454.5	453.1	450.9	448.7	446.6	444.4	442.4
60°	422.9	422.8	422.6	422.3	422.1	420.8	418.3	415.8	413.3	410.8	408.9
62.5°	392.4	391.8	391.3	390.7	390.2	388.7	386.2	383.7	381.2	378.7	376.8
65°	344.6	343.5	342.4	341.4	340.4	338.9	336.7	334.7	332.6	330.6	328.9
67.5°	293.9	293.0	292.1	291.1	290.3	289.0	287.5	285.9	284.3	282.8	281.2
70°	263.3	262.1	260.8	259.6	258.3	257.1	255.8	254.6	253.3	252.1	250.7
72.5°	231.2	230.2	229.3	228.5	227.6	226.4	225.0	223.6	222.1	220.7	219.5
75°	182.1	181.2	180.4	179.6	178.8	178.0	177.4	176.7	176.1	175.6	174.5
77.5°	138.6	138.1	137.7	137.2	136.7	136.2	135.4	134.6	133.9	133.1	132.4
80°	110.2	109.6	109.0	108.3	107.7	107.2	106.7	106.4	105.9	105.5	105.3
82.5°	82.6	82.4	82.3	82.1	82.0	81.9	81.9	81.8	81.7	81.6	81.2
85°	48.5	48.2	47.7	47.3	46.9	46.7	46.7	46.7	46.7	46.7	46.3
87.5°	19.5	19.3	19.0	18.7	18.5	18.4	18.5	18.6	18.7	18.9	18.8
90°	0.5	1.6	2.8	3.9	5.0	6.3	7.8	9.3	10.7	12.2	12.7
92.5°	9.5	9.2	8.8	8.5	8.2	8.6	9.7	10.8	11.9	13.0	13.7
95°	31.0	26.4	21.8	17.1	12.5	10.8	12.0	13.3	14.5	15.8	16.6
97.5°	62.3	60.3	58.2	56.1	54.0	49.0	40.8	32.6	24.5	16.4	17.3
100°	86.0	88.2	90.5	92.7	95.0	87.3	69.6	52.1	34.4	16.8	17.7
102.5°	112.8	114.4	116.1	117.7	119.3	110.5	91.2	72.0	52.7	33.4	30.7
105°	151.6	152.8	154.1	155.2	156.5	152.0	141.9	131.7	121.5	111.4	91.4
107.5°	192.4	193.4	194.5	195.5	196.4	197.7	199.3	200.9	202.5	204.1	189.5
110°	219.7	220.6	221.5	222.4	223.3	224.4	225.6	226.9	228.1	229.3	225.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	245.8	246.6	247.4	248.2	249.0	250.0	251.3	252.5	253.8	255.0	255.1
115°	284.3	285.0	285.6	286.3	287.0	287.8	288.9	289.9	290.9	291.9	293.1
117.5°	321.6	322.4	323.3	324.1	324.9	325.7	326.2	326.7	327.3	327.7	328.7
120°	344.8	345.8	346.9	347.9	348.9	349.6	349.9	350.3	350.6	350.9	351.9
122.5°	368.5	369.3	370.1	371.0	371.8	372.4	372.8	373.3	373.7	374.2	374.8
125°	400.7	401.7	402.6	403.5	404.4	405.1	405.6	406.0	406.4	406.9	407.1
127.5°	432.1	433.0	433.9	434.8	435.7	436.4	436.9	437.6	438.1	438.6	439.0
130°	451.7	452.5	453.4	454.3	455.2	455.9	456.4	456.8	457.3	457.7	458.2
132.5°	470.4	471.3	472.2	473.1	473.9	474.6	474.9	475.3	475.6	476.1	476.5
135°	498.9	499.6	500.2	501.0	501.7	502.2	502.7	503.1	503.5	504.0	504.4
137.5°	523.3	524.2	525.0	525.9	526.7	527.4	527.5	527.8	528.1	528.3	528.9
140°	539.6	540.3	541.0	541.6	542.3	542.9	543.1	543.5	543.9	544.2	544.7
142.5°	554.6	555.4	556.1	556.7	557.4	557.9	558.2	558.6	558.9	559.3	559.6
145°	575.7	576.5	577.3	578.1	578.9	579.4	579.6	579.9	580.1	580.3	580.5
147.5°	595.6	596.1	596.6	597.1	597.6	598.0	598.2	598.4	598.7	599.0	599.1
150°	607.8	608.1	608.4	608.8	609.1	609.4	609.7	609.8	610.1	610.3	610.6
152.5°	618.8	618.9	619.0	619.2	619.4	619.6	619.6	619.8	619.9	620.1	620.5
155°	634.2	634.0	633.7	633.6	633.3	633.3	633.4	633.5	633.6	633.7	634.3
157.5°	646.2	646.2	646.1	646.1	646.1	646.0	646.0	645.9	645.7	645.6	646.3
160°	653.5	653.4	653.4	653.2	653.1	653.0	652.8	652.7	652.6	652.6	653.2
162.5°	660.5	660.1	659.9	659.6	659.2	659.1	659.0	658.9	658.7	658.6	659.4
165°	668.8	668.4	668.2	667.8	667.4	667.2	667.1	667.0	666.9	666.7	667.7
167.5°	675.3	674.8	674.4	674.0	673.5	673.2	673.2	673.2	673.2	673.2	674.2
170°	678.9	678.5	678.1	677.6	677.2	676.9	676.9	676.9	676.9	676.9	677.9
172.5°	681.4	680.9	680.3	679.8	679.2	679.0	679.1	679.2	679.3	679.4	680.3
175°	684.6	684.0	683.4	682.9	682.3	682.1	682.2	682.3	682.4	682.5	683.3
177.5°	685.4	684.9	684.5	684.0	683.6	683.4	683.5	683.6	683.7	683.8	684.5
180°	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1081.7	1083.4	1085.0	1085.8	1085.7	1085.5	1085.3	1085.1
5°	1076.0	1078.1	1080.2	1081.0	1080.6	1080.2	1079.8	1079.3
7.5°	1064.6	1066.5	1068.4	1069.2	1068.9	1068.6	1068.4	1068.2
10°	1054.2	1056.0	1057.8	1058.6	1058.2	1057.7	1057.4	1056.9
12.5°	1042.7	1044.0	1045.4	1046.0	1045.7	1045.4	1045.3	1045.0
15°	1022.0	1023.6	1025.3	1025.5	1024.2	1023.0	1021.8	1020.6
17.5°	995.8	996.9	998.1	998.4	998.0	997.6	997.1	996.7
20°	976.4	977.2	978.1	978.2	977.6	977.0	976.3	975.7
22.5°	955.9	956.6	957.3	957.2	956.4	955.6	954.8	954.0
25°	921.9	922.2	922.4	922.2	921.6	921.0	920.3	919.7
27.5°	885.8	886.0	886.2	885.8	885.1	884.3	883.5	882.7
30°	860.9	860.9	860.9	860.1	858.7	857.2	855.8	854.3
32.5°	834.6	833.5	832.3	831.3	830.5	829.7	828.9	828.2
35°	792.1	790.9	789.6	788.5	787.4	786.4	785.3	784.3
37.5°	748.1	746.5	745.1	744.0	743.3	742.7	742.0	741.4
40°	719.3	717.7	716.0	714.8	714.0	713.1	712.3	711.5
42.5°	689.5	687.8	686.2	684.9	684.1	683.2	682.4	681.6
45°	644.9	642.4	639.9	638.1	637.1	636.1	635.0	634.0
47.5°	597.9	595.5	593.0	591.3	590.4	589.5	588.6	587.6
50°	566.9	564.5	562.3	560.5	559.3	558.0	556.8	555.5
52.5°	535.4	533.4	531.5	529.9	528.7	527.4	526.2	525.0
55°	487.5	485.2	483.0	481.3	480.2	479.2	478.1	477.2
57.5°	440.3	438.4	436.3	434.7	433.5	432.3	431.1	429.9
60°	407.1	405.2	403.3	401.9	400.8	399.8	398.8	397.8
62.5°	375.0	373.1	371.2	370.0	369.3	368.5	367.8	367.1
65°	327.2	325.6	323.9	322.7	322.1	321.5	320.8	320.2
67.5°	279.8	278.4	276.9	275.7	274.9	274.0	273.1	272.2
70°	249.2	247.7	246.3	245.0	244.0	243.0	241.9	240.9
72.5°	218.1	216.9	215.6	214.6	214.1	213.6	213.0	212.5
75°	173.4	172.5	171.4	170.6	170.0	169.3	168.7	168.1
77.5°	131.7	131.0	130.3	130.0	130.0	130.0	130.0	130.0
80°	105.1	104.9	104.7	104.6	104.6	104.6	104.6	104.6
82.5°	80.9	80.5	80.1	79.8	79.7	79.5	79.4	79.2
85°	45.8	45.5	45.0	44.9	44.9	44.9	44.9	44.9
87.5°	18.7	18.6	18.5	18.5	18.6	18.6	18.7	18.7
90°	13.1	13.6	14.0	14.4	14.6	14.8	15.1	15.2
92.5°	14.4	15.2	15.9	16.3	16.5	16.6	16.8	16.9
95°	17.4	18.1	18.9	19.4	19.4	19.4	19.4	19.4
97.5°	18.2	19.1	20.0	20.5	20.6	20.7	20.9	21.0
100°	18.5	19.5	20.4	20.9	21.0	21.1	21.2	21.4
102.5°	27.8	25.1	22.3	21.0	21.1	21.4	21.6	21.8
105°	71.3	51.4	31.4	21.5	21.7	21.9	22.1	22.4
107.5°	174.8	160.2	145.4	130.6	115.5	100.4	85.3	70.3
110°	221.9	218.2	214.5	204.5	188.3	172.2	156.0	139.8





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CATALOG NUMBER: S123DIP-S775D585U940-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	255.1	255.2	255.3	253.6	250.2	246.7	243.3	240.0
115°	294.2	295.3	296.5	297.2	297.7	298.2	298.6	299.1
117.5°	329.6	330.5	331.4	331.9	332.0	332.1	332.2	332.3
120°	352.8	353.7	354.5	355.0	355.0	355.0	355.0	355.0
122.5°	375.4	376.0	376.7	377.0	377.1	377.2	377.3	377.4
125°	407.3	407.5	407.8	408.0	408.2	408.5	408.7	408.9
127.5°	439.3	439.7	440.1	440.1	439.9	439.7	439.4	439.3
130°	458.6	459.1	459.5	459.7	459.4	459.2	459.0	458.8
132.5°	477.0	477.4	477.9	478.0	477.6	477.2	477.0	476.6
135°	504.7	505.1	505.3	505.3	505.1	504.7	504.4	504.0
137.5°	529.4	529.9	530.5	530.7	530.4	530.2	529.9	529.8
140°	545.1	545.5	546.0	546.1	545.9	545.6	545.5	545.2
142.5°	560.0	560.4	560.7	560.7	560.4	560.1	559.7	559.5
145°	580.8	580.9	581.2	581.3	581.3	581.3	581.3	581.3
147.5°	599.4	599.6	599.9	599.7	599.1	598.6	598.2	597.6
150°	610.7	611.0	611.2	611.2	610.8	610.5	610.1	609.8
152.5°	620.9	621.3	621.7	621.6	621.2	620.6	620.1	619.6
155°	634.8	635.4	636.0	635.9	635.3	634.5	633.9	633.2
157.5°	646.9	647.6	648.4	648.2	647.3	646.5	645.6	644.7
160°	653.9	654.5	655.2	655.1	654.4	653.6	652.8	652.0
162.5°	660.1	660.9	661.7	661.7	661.0	660.3	659.6	659.0
165°	668.6	669.5	670.4	670.5	669.7	668.9	668.1	667.3
167.5°	675.1	676.0	676.9	676.9	676.0	675.1	674.2	673.2
170°	678.8	679.7	680.6	680.6	679.7	678.8	677.9	676.9
172.5°	681.2	682.1	683.0	683.0	682.0	681.0	679.9	678.9
175°	684.1	684.9	685.7	685.6	684.7	683.9	683.0	682.0
177.5°	685.2	685.9	686.6	686.5	685.6	684.7	683.9	683.0
180°	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6

(END OF REPORT)