

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: P331987

Luminaire Tested: **S123DIP-S775D1025U835-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331987  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S775D1025U835-4F0-1E-UDD-D4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6943.8 lumens  
Efficiency: N/A  
Efficacy: 133.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

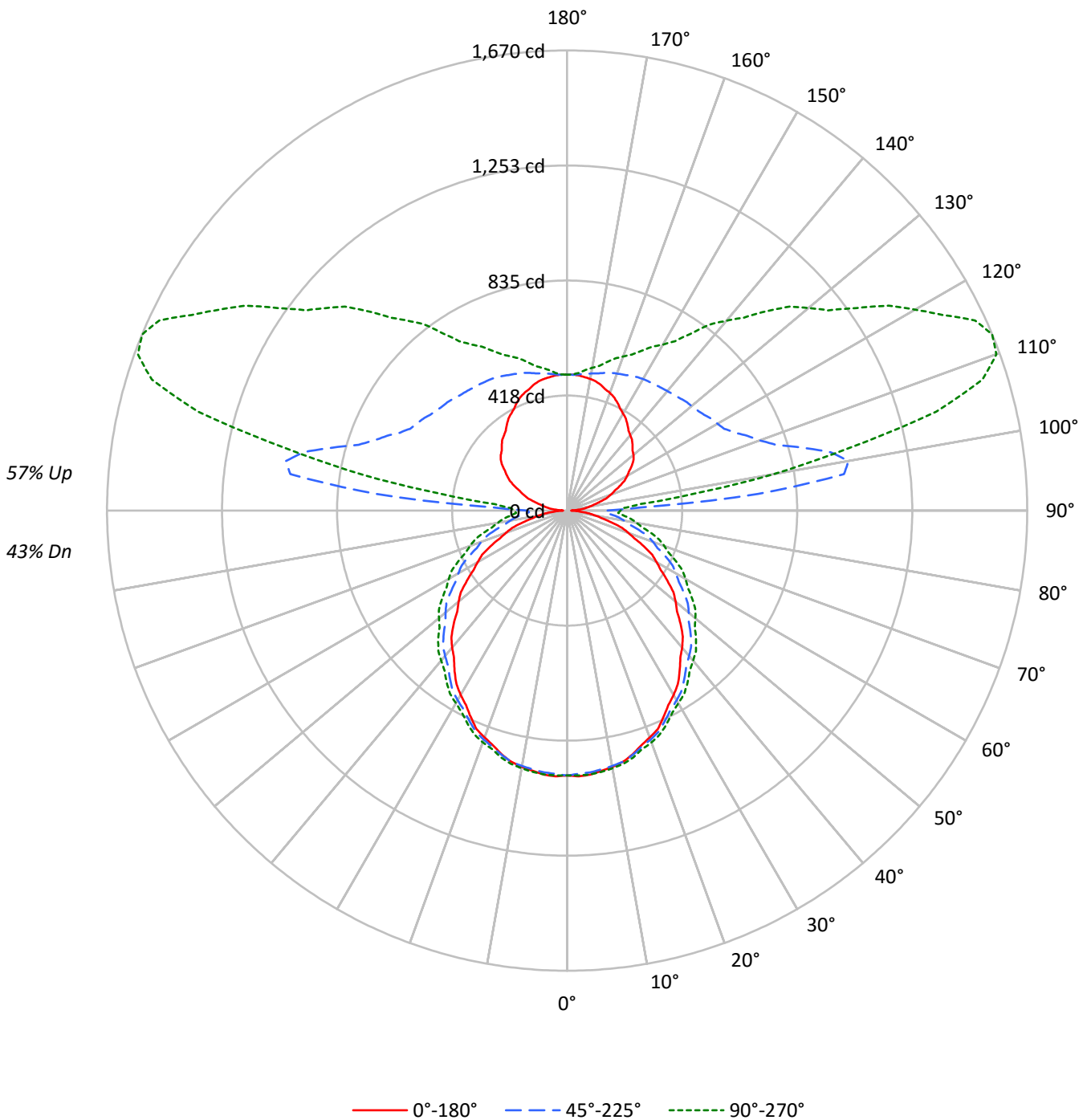
Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20										
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	50	30	10	50	30	10	0														
RCR																																						
0	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43																				
1	95	91	86	83	87	83	79	76	68	65	63	55	53	51	42	41	40	34																				
2	86	79	72	67	78	72	66	62	59	55	52	47	45	42	37	35	33	28																				
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	32	30	28	23																				
4	72	61	52	46	65	55	48	43	46	41	36	37	33	30	29	26	24	20																				
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	26	23	20	17																				
6	60	48	40	34	55	44	37	32	37	31	27	30	26	22	23	20	18	15																				
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13																				
8	52	39	31	26	47	36	29	24	30	25	21	25	20	17	19	16	14	12																				
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	10																				
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	11	9																				

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

	0°	45°	90°
0°	10346	10346	10346
5°	10379	10086	10092
10°	10286	9853	9804
15°	10153	9590	9490
20°	9963	9288	9146
25°	9730	8942	8782
30°	9490	8630	8415
35°	9221	8300	8121
40°	8965	8000	7807
45°	8682	7712	7556
50°	8400	7427	7278
55°	8091	7135	7030
60°	7790	6839	6774
65°	7480	6524	6470
70°	7013	6169	6159
75°	6425	5763	5842
80°	5749	5363	5479
85°	5117	5090	5269



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.1	1.3
10°-20°	259.8	3.7
20°-30°	388.5	5.6
30°-40°	464.0	6.7
40°-50°	485.4	7.0
50°-60°	455.5	6.6
60°-70°	380.5	5.5
70°-80°	272.2	3.9
80°-90°	166.1	2.4
90°-100°	376.3	5.4
100°-110°	851.9	12.3
110°-120°	814.4	11.7
120°-130°	638.3	9.2
130°-140°	493.5	7.1
140°-150°	361.5	5.2
150°-160°	250.1	3.6
160°-170°	146.9	2.1
170°-180°	47.8	0.7
0°-30°	739.4	10.6
0°-40°	1203.3	17.3
0°-60°	2144.3	30.9
0°-90°	2963.1	42.7
90°-120°	2042.5	29.4
90°-150°	3535.9	50.9
90°-180°	3981.0	57.3
0°-180°	6943.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	961	961	961	961	961	
5°	962	960	954	962	961	91
15°	916	919	918	928	928	258
25°	827	837	841	854	854	381
35°	712	729	742	757	762	445
45°	582	607	634	653	662	449
55°	444	479	516	543	553	397
65°	307	348	394	424	436	303
75°	166	216	268	301	315	178
85°	51	104	159	193	205	54
90°	16	77	143	180	193	12
95°	46	163	696	308	262	46
105°	124	206	881	1510	1387	132
115°	210	274	669	1426	1633	208
125°	288	341	606	1093	1281	256
135°	336	400	578	886	1024	259
145°	381	436	558	709	784	239
155°	432	466	540	614	640	199
165°	472	486	517	548	558	133
175°	492	493	496	503	502	47
180°	493	493	493	493	493	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	965.4	964.8	964.3	963.7	963.2	962.1	960.7	959.2	957.7	956.2	957.7
5°	962.3	961.8	961.3	960.9	960.4	959.5	958.1	956.7	955.3	953.9	955.8
7.5°	952.8	952.9	953.0	953.1	953.2	952.6	951.2	949.9	948.5	947.2	949.5
10°	944.5	944.9	945.4	945.9	946.3	946.0	944.8	943.7	942.5	941.3	943.7
12.5°	934.4	935.1	935.7	936.4	937.0	937.0	936.2	935.4	934.6	933.8	935.9
15°	916.2	916.9	917.6	918.3	919.0	919.2	919.0	918.8	918.5	918.3	920.6
17.5°	893.2	894.6	896.0	897.3	898.7	899.4	899.3	899.2	899.1	899.0	901.1
20°	876.4	877.8	879.2	880.6	882.0	882.9	883.4	883.9	884.3	884.8	886.9
22.5°	858.8	860.2	861.6	863.0	864.4	865.4	866.1	866.7	867.4	868.0	870.7
25°	827.2	829.5	831.8	834.2	836.5	838.0	838.7	839.4	840.1	840.8	843.8
27.5°	795.4	798.0	800.7	803.3	806.0	808.0	809.5	811.0	812.5	814.0	816.6
30°	772.7	775.8	778.8	781.8	784.8	787.3	789.1	791.0	792.9	794.7	797.5
32.5°	747.6	751.0	754.4	757.8	761.2	764.1	766.5	769.0	771.4	773.8	776.8
35°	712.0	715.7	719.5	723.2	726.9	730.3	733.3	736.3	739.4	742.4	745.9
37.5°	674.3	678.5	682.7	686.9	691.1	695.0	698.8	702.5	706.2	709.9	713.9
40°	649.2	653.4	657.6	661.8	665.9	670.4	675.0	679.7	684.3	689.0	692.9
42.5°	621.5	626.7	631.8	636.9	642.0	647.0	651.8	656.7	661.5	666.4	670.7
45°	582.2	587.8	593.3	598.9	604.5	610.2	616.0	621.8	627.7	633.5	637.9
47.5°	540.9	547.3	553.6	559.9	566.2	572.7	579.4	586.0	592.7	599.3	604.3
50°	514.1	520.6	527.1	533.7	540.2	547.0	554.3	561.5	568.7	575.9	581.2
52.5°	485.6	492.5	499.4	506.3	513.2	520.6	528.6	536.5	544.5	552.4	558.0
55°	444.0	451.6	459.3	467.0	474.7	482.7	491.1	499.5	507.8	516.2	522.5
57.5°	403.3	411.3	419.3	427.3	435.4	443.9	453.1	462.3	471.4	480.6	486.9
60°	374.9	383.2	391.6	400.0	408.4	417.3	426.9	436.4	445.9	455.5	462.0
62.5°	348.0	356.6	365.2	373.7	382.3	391.6	401.7	411.8	421.9	432.0	438.5
65°	306.8	315.9	324.9	334.0	343.1	352.7	363.0	373.2	383.5	393.7	400.7
67.5°	264.9	274.5	284.2	293.8	303.4	313.5	323.9	334.3	344.7	355.2	362.8
70°	235.6	245.6	255.6	265.6	275.6	286.2	297.4	308.5	319.7	330.9	338.3
72.5°	208.8	218.8	228.8	238.8	248.8	259.6	271.1	282.7	294.2	305.7	313.4
75°	166.5	177.4	188.4	199.3	210.2	221.5	233.1	244.8	256.4	268.1	275.7
77.5°	129.6	140.7	151.7	162.7	173.7	185.1	196.9	208.6	220.3	232.0	240.1
80°	103.7	115.1	126.5	137.9	149.3	161.0	173.1	185.2	197.3	209.4	217.3
82.5°	81.0	92.6	104.2	115.8	127.4	139.3	151.6	163.9	176.2	188.5	196.4
85°	51.3	62.9	74.6	86.2	97.8	109.8	122.2	134.5	146.8	159.2	167.1
87.5°	28.3	40.2	52.2	64.4	76.4	88.5	101.0	113.5	125.9	138.4	146.1
90°	15.6	29.0	42.4	56.8	70.2	83.8	98.7	113.6	128.4	143.3	150.2
92.5°	25.2	41.4	60.1	78.2	96.8	122.6	160.4	215.0	268.8	265.1	235.1
95°	45.5	57.5	77.6	103.6	138.7	187.8	284.1	444.2	619.3	695.6	591.0
97.5°	68.2	77.3	94.1	117.1	150.8	202.5	294.4	473.0	756.8	1013.4	1084.5
100°	83.3	91.7	106.2	127.6	159.0	207.0	287.6	446.0	719.2	1036.4	1239.8
102.5°	99.2	107.7	120.6	140.5	168.7	213.1	286.3	422.2	666.5	979.4	1242.5
105°	124.2	132.7	144.3	161.9	186.4	225.2	289.1	401.9	600.6	881.1	1174.1
107.5°	149.7	157.4	167.9	184.5	207.0	242.8	299.7	394.6	556.2	793.5	1059.8
110°	168.0	175.2	184.3	199.5	220.7	255.4	309.6	394.8	537.8	743.8	988.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	185.6	192.0	200.4	214.9	235.3	268.6	319.3	398.5	525.2	708.4	924.9
115°	209.9	216.6	225.4	238.2	258.0	290.5	336.8	406.1	516.3	669.4	847.6
117.5°	235.0	241.3	248.0	258.9	279.6	309.4	354.8	416.9	511.2	642.9	797.7
120°	251.7	255.9	262.0	273.2	293.3	322.7	366.3	425.9	510.4	629.9	771.0
122.5°	266.9	270.5	276.1	287.5	306.3	336.8	379.2	434.4	512.2	620.1	748.3
125°	287.6	289.6	295.6	306.6	325.6	355.9	397.6	448.2	514.9	606.5	718.2
127.5°	304.2	307.0	314.1	325.1	345.8	375.4	414.7	459.8	519.3	596.6	690.8
130°	314.6	317.3	326.1	337.8	358.6	387.7	425.3	467.9	522.5	590.0	675.3
132.5°	321.7	325.5	335.2	349.5	370.4	398.4	434.3	475.2	524.0	585.0	660.5
135°	335.5	339.2	350.0	364.7	385.5	413.6	447.1	483.6	526.1	577.5	640.6
137.5°	348.5	352.5	363.1	378.8	399.4	425.0	456.2	490.0	526.9	570.3	623.3
140°	356.4	361.4	371.4	387.3	407.3	432.6	462.3	492.9	527.5	566.2	612.6
142.5°	366.0	370.0	380.6	394.8	414.5	437.9	466.2	495.5	527.1	561.2	602.5
145°	381.4	384.1	392.9	407.6	424.3	447.2	473.1	500.1	528.0	558.0	591.8
147.5°	395.9	397.7	406.5	419.4	435.8	455.4	479.1	503.3	528.0	554.2	582.1
150°	406.3	407.3	415.2	428.2	442.2	460.2	483.1	504.1	528.0	551.0	575.9
152.5°	416.6	416.8	424.8	436.2	448.6	465.8	485.5	505.7	525.6	547.0	569.6
155°	432.2	432.2	438.2	448.2	459.2	473.1	490.1	506.1	523.0	540.0	560.0
157.5°	444.6	445.4	450.2	459.0	468.3	479.1	492.7	507.1	519.7	533.8	549.2
160°	454.2	454.2	458.2	466.1	473.1	483.1	495.1	507.1	518.1	529.0	542.0
162.5°	461.4	461.4	464.6	470.9	477.1	485.5	495.9	506.3	514.9	524.2	534.8
165°	472.1	471.1	473.1	478.1	482.1	489.1	497.1	504.1	510.1	517.1	525.0
167.5°	480.3	479.1	480.1	483.9	486.7	491.1	496.9	502.5	505.3	509.9	515.7
170°	485.1	483.1	484.1	487.1	489.1	491.1	496.1	500.1	502.1	505.1	510.1
172.5°	488.3	487.1	487.3	489.5	490.7	491.9	496.1	499.3	499.7	501.1	504.5
175°	492.1	491.1	490.1	492.1	492.1	493.1	495.1	497.1	496.1	496.1	498.1
177.5°	493.9	493.1	492.3	493.1	493.1	493.1	493.9	495.5	493.9	493.1	493.9
180°	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	959.2	960.7	962.1	962.8	962.6	962.4	962.2	962.1
5°	957.6	959.5	961.3	962.1	961.9	961.7	961.5	961.2
7.5°	951.8	954.2	956.5	957.5	957.2	957.0	956.7	956.4
10°	946.0	948.3	950.6	951.6	951.1	950.6	950.2	949.7
12.5°	938.1	940.2	942.3	943.2	942.7	942.3	941.8	941.3
15°	922.9	925.3	927.6	928.6	928.4	928.2	927.9	927.7
17.5°	903.2	905.3	907.4	908.3	908.0	907.6	907.3	907.0
20°	889.0	891.1	893.2	894.3	894.6	894.8	895.0	895.3
22.5°	873.3	876.0	878.6	879.9	879.8	879.6	879.5	879.3
25°	846.9	849.9	852.9	854.4	854.4	854.4	854.4	854.4
27.5°	819.2	821.8	824.4	825.8	826.0	826.2	826.4	826.6
30°	800.3	803.1	805.9	807.3	807.3	807.3	807.3	807.3
32.5°	779.7	782.7	785.7	787.5	788.0	788.6	789.1	789.7
35°	749.4	752.9	756.3	758.6	759.5	760.4	761.3	762.3
37.5°	717.8	721.8	725.7	728.1	728.8	729.6	730.3	731.1
40°	696.9	700.8	704.8	707.2	708.2	709.1	710.0	711.0
42.5°	675.0	679.3	683.7	686.5	687.8	689.1	690.4	691.7
45°	642.3	646.7	651.2	654.3	656.2	658.0	659.9	661.8
47.5°	609.3	614.3	619.3	622.5	623.9	625.4	626.8	628.2
50°	586.6	591.9	597.3	600.8	602.4	604.0	605.7	607.3
52.5°	563.5	569.1	574.6	578.4	580.4	582.4	584.4	586.4
55°	528.8	535.1	541.3	545.4	547.3	549.1	551.0	552.9
57.5°	493.3	499.6	505.9	510.2	512.4	514.6	516.7	518.9
60°	468.5	475.0	481.5	486.1	488.6	491.2	493.8	496.3
62.5°	445.1	451.6	458.1	462.5	464.9	467.3	469.7	472.0
65°	407.7	414.6	421.6	426.3	428.6	430.9	433.3	435.6
67.5°	370.4	378.1	385.7	390.5	392.4	394.4	396.4	398.3
70°	345.8	353.2	360.7	365.5	367.9	370.2	372.5	374.9
72.5°	321.0	328.6	336.3	341.3	343.6	345.9	348.2	350.6
75°	283.4	291.1	298.8	304.0	306.8	309.6	312.4	315.2
77.5°	248.2	256.3	264.4	269.5	271.7	273.8	276.0	278.1
80°	225.2	233.1	241.1	246.2	248.5	250.8	253.2	255.5
82.5°	204.3	212.2	220.1	225.2	227.6	229.9	232.2	234.5
85°	175.0	182.9	190.8	195.9	198.2	200.6	202.9	205.2
87.5°	154.2	162.3	170.4	176.0	178.1	180.6	183.1	185.3
90°	159.1	168.0	176.9	184.0	185.4	188.7	192.0	193.3
92.5°	211.1	201.5	201.4	201.2	201.5	200.6	203.8	204.1
95°	477.4	368.9	323.2	292.0	275.4	268.7	264.0	262.4
97.5°	1005.8	834.4	712.6	597.8	526.5	483.9	459.3	453.0
100°	1281.4	1207.3	1097.3	960.1	861.6	791.1	754.5	757.8
102.5°	1369.5	1373.4	1311.9	1226.5	1150.4	1095.0	1064.8	1044.2
105°	1389.2	1495.5	1521.0	1499.4	1455.5	1419.7	1389.9	1387.0
107.5°	1302.6	1471.0	1564.7	1604.3	1607.2	1596.5	1587.7	1580.6
110°	1223.0	1412.7	1544.6	1618.4	1648.2	1658.0	1657.9	1657.8





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CATALOG NUMBER: S123DIP-S775D1025U835-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1143.4	1336.9	1483.7	1577.5	1630.6	1657.4	1667.1	1669.5
115°	1037.9	1217.2	1369.5	1482.0	1558.7	1604.5	1626.3	1633.2
117.5°	959.2	1114.7	1252.0	1366.0	1445.9	1498.0	1528.6	1537.2
120°	917.1	1057.2	1182.3	1286.7	1367.1	1424.7	1450.2	1457.9
122.5°	883.0	1010.1	1126.3	1223.3	1295.0	1347.0	1375.0	1384.2
125°	836.8	950.5	1051.2	1134.3	1199.9	1245.4	1272.0	1280.6
127.5°	795.7	897.3	988.3	1064.1	1122.6	1161.7	1185.8	1193.8
130°	769.5	863.8	949.1	1019.8	1074.1	1111.5	1133.8	1143.2
132.5°	745.0	831.9	911.4	979.0	1030.3	1067.8	1087.9	1095.1
135°	711.7	786.7	855.8	915.4	965.5	996.6	1015.7	1023.8
137.5°	681.1	742.8	802.4	854.2	896.4	927.9	944.3	950.0
140°	663.0	717.4	768.8	814.0	853.1	882.2	899.4	899.5
142.5°	645.3	692.1	736.8	776.3	809.8	835.7	851.2	851.4
145°	625.6	660.4	694.2	724.5	750.4	772.3	781.2	784.2
147.5°	609.6	636.3	662.6	683.9	703.7	718.7	727.1	728.8
150°	598.9	621.9	642.8	662.0	677.5	688.9	695.4	695.8
152.5°	590.1	609.9	628.5	644.3	656.1	666.4	670.1	670.2
155°	576.9	592.9	607.9	619.9	628.9	636.8	638.8	639.8
157.5°	563.0	576.3	587.9	597.3	605.1	611.1	612.7	612.5
160°	555.0	566.0	575.9	582.9	589.9	595.9	595.9	594.9
162.5°	545.4	554.8	564.0	570.2	574.8	579.9	579.9	578.9
165°	533.0	539.0	546.0	551.0	555.0	559.0	558.0	558.0
167.5°	522.2	526.8	530.8	534.4	536.2	539.0	538.0	538.0
170°	515.1	518.1	522.0	524.0	525.0	527.0	526.0	526.0
172.5°	508.7	510.9	514.1	515.3	515.5	517.5	515.7	514.9
175°	500.1	501.1	503.1	503.1	503.1	504.1	503.1	502.1
177.5°	494.7	495.5	496.3	496.3	495.5	496.3	494.7	494.7
180°	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1

(END OF REPORT)