

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: P331986-830

Luminaire Tested: **S123DIP-S775D1025U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331986-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S775D1025U830-4F0-1E-UDD-D1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6366.5 lumens  
Efficiency: N/A  
Efficacy: 122.4 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

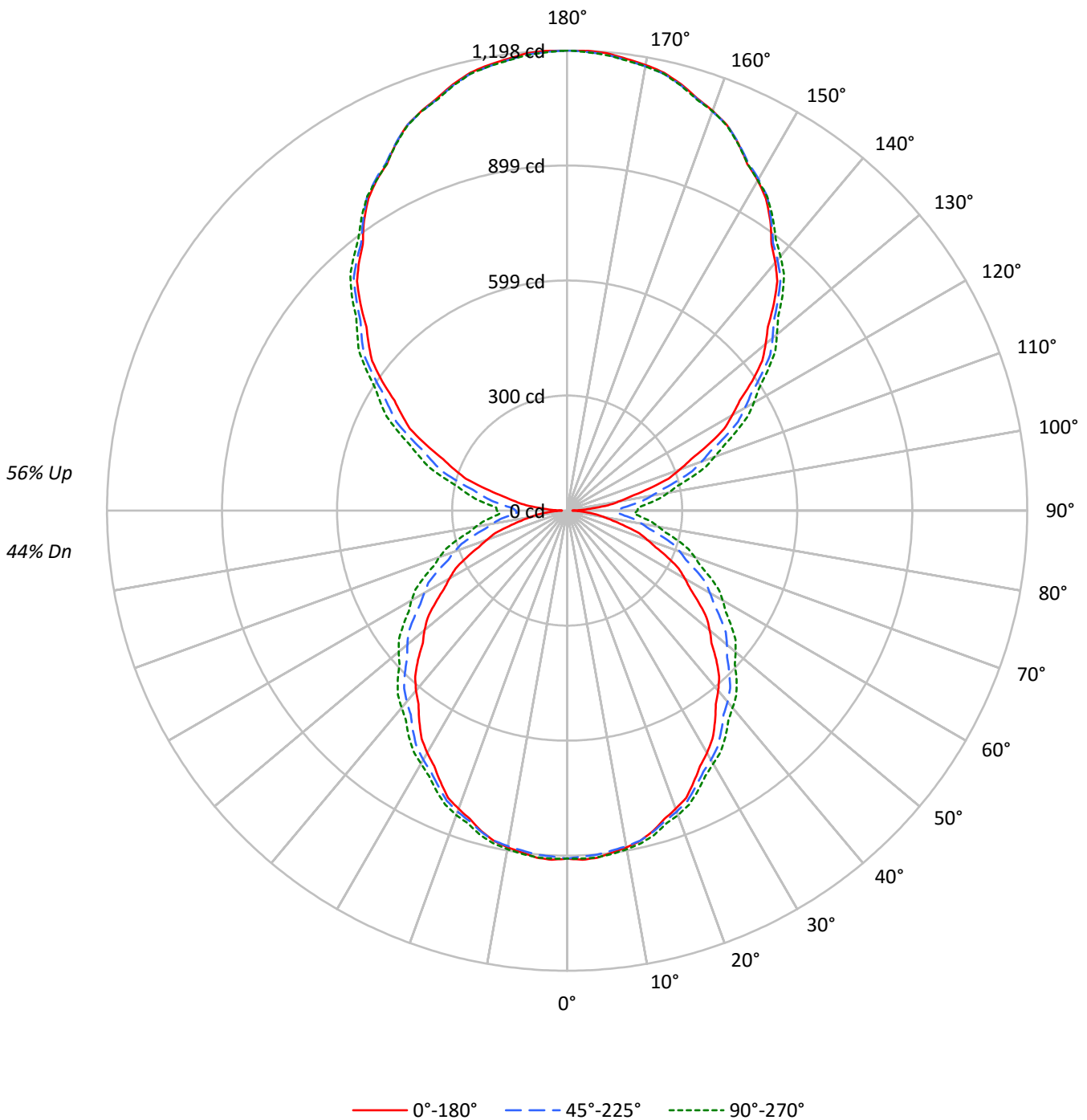
Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	50	50	50	44
1	95	91	87	83	87	83	79	76	69	66	64	55	54	52	43	42	41	35
2	87	79	72	67	79	72	66	62	60	55	52	48	45	43	37	35	34	29
3	79	69	61	55	72	63	56	51	52	47	43	42	39	36	33	30	28	24
4	72	61	53	46	65	56	49	43	46	41	37	37	33	30	29	26	24	20
5	66	54	46	40	60	50	42	37	41	36	31	33	29	26	26	23	21	17
6	61	48	40	34	55	44	37	32	37	31	27	30	26	23	24	21	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	22	18	16	13
8	52	39	32	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11
10	45	33	26	21	41	30	24	19	26	20	17	21	17	14	17	14	12	10

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

	0°	45°	90°
0°	9752	9752	9752
5°	9782	9507	9512
10°	9694	9287	9240
15°	9570	9038	8945
20°	9390	8755	8621
25°	9171	8428	8278
30°	8945	8133	7931
35°	8692	7823	7655
40°	8450	7540	7358
45°	8182	7269	7122
50°	7918	7000	6860
55°	7627	6725	6625
60°	7343	6446	6385
65°	7051	6149	6098
70°	6611	5815	5805
75°	6055	5432	5506
80°	5416	5056	5164
85°	4828	4799	4966



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.9	1.3
10°-20°	244.8	3.8
20°-30°	366.2	5.8
30°-40°	437.3	6.9
40°-50°	457.5	7.2
50°-60°	429.4	6.7
60°-70°	358.6	5.6
70°-80°	256.6	4.0
80°-90°	156.5	2.5
90°-100°	174.0	2.7
100°-110°	304.1	4.8
110°-120°	444.3	7.0
120°-130°	549.4	8.6
130°-140°	599.3	9.4
140°-150°	579.8	9.1
150°-160°	486.0	7.6
160°-170°	323.5	5.1
170°-180°	113.3	1.8
0°-30°	696.9	10.9
0°-40°	1134.2	17.8
0°-60°	2021.1	31.7
0°-90°	2792.8	43.9
90°-120°	922.4	14.5
90°-150°	2650.9	41.6
90°-180°	3574.0	56.1
0°-180°	6366.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	907	905	899	906	906	86
15°	864	866	866	875	874	243
25°	780	789	792	805	805	359
35°	671	687	700	714	718	420
45°	549	572	597	615	624	423
55°	418	451	486	512	521	375
65°	289	328	371	400	411	286
75°	157	203	253	284	297	168
85°	48	98	150	182	193	51
90°	14	72	134	170	183	12
95°	66	112	167	200	212	71
105°	220	247	296	323	334	235
115°	405	420	453	477	485	401
125°	588	592	618	634	638	525
135°	761	766	776	789	793	586
145°	922	923	926	932	933	576
155°	1055	1055	1056	1059	1053	485
165°	1149	1146	1146	1151	1145	324
175°	1195	1191	1191	1196	1190	113
180°	1198	1198	1198	1198	1198	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	909.9	909.4	908.9	908.3	907.9	906.8	905.5	904.1	902.7	901.3	902.7
5°	907.0	906.5	906.1	905.7	905.2	904.4	903.1	901.7	900.4	899.1	900.9
7.5°	898.1	898.1	898.2	898.3	898.4	897.9	896.5	895.3	894.0	892.8	894.9
10°	890.2	890.6	891.1	891.6	891.9	891.6	890.5	889.5	888.3	887.2	889.5
12.5°	880.7	881.4	881.9	882.6	883.2	883.2	882.4	881.7	880.9	880.1	882.1
15°	863.6	864.2	864.9	865.5	866.2	866.4	866.2	866.0	865.7	865.5	867.7
17.5°	841.9	843.2	844.5	845.7	847.1	847.7	847.6	847.5	847.4	847.3	849.3
20°	826.0	827.4	828.7	830.0	831.3	832.2	832.6	833.1	833.5	834.0	835.9
22.5°	809.5	810.8	812.1	813.4	814.7	815.7	816.3	816.9	817.6	818.1	820.7
25°	779.7	781.8	784.0	786.3	788.4	789.9	790.5	791.2	791.8	792.5	795.3
27.5°	749.7	752.1	754.7	757.1	759.7	761.6	763.0	764.4	765.8	767.2	769.7
30°	728.3	731.2	734.1	736.9	739.7	742.1	743.8	745.6	747.3	749.0	751.7
32.5°	704.6	707.8	711.1	714.3	717.5	720.2	722.5	724.8	727.1	729.3	732.2
35°	671.1	674.6	678.2	681.6	685.1	688.3	691.2	694.0	696.9	699.7	703.0
37.5°	635.6	639.5	643.5	647.4	651.4	655.1	658.6	662.1	665.6	669.1	672.9
40°	611.9	615.9	619.8	623.8	627.6	631.9	636.2	640.6	645.0	649.4	653.1
42.5°	585.8	590.7	595.5	600.3	605.1	609.8	614.3	619.0	623.5	628.1	632.2
45°	548.7	554.0	559.2	564.5	569.8	575.1	580.6	586.1	591.6	597.1	601.2
47.5°	509.8	515.9	521.8	527.7	533.7	539.8	546.1	552.3	558.6	564.9	569.6
50°	484.6	490.7	496.8	503.0	509.2	515.6	522.5	529.2	536.0	542.8	547.8
52.5°	457.7	464.2	470.7	477.2	483.7	490.7	498.2	505.7	513.2	520.7	525.9
55°	418.5	425.7	432.9	440.2	447.4	455.0	462.9	470.8	478.6	486.5	492.5
57.5°	380.1	387.7	395.2	402.7	410.4	418.4	427.1	435.7	444.3	453.0	458.9
60°	353.4	361.2	369.1	377.0	384.9	393.3	402.4	411.3	420.3	429.3	435.5
62.5°	328.0	336.1	344.2	352.2	360.3	369.1	378.6	388.1	397.7	407.2	413.3
65°	289.2	297.7	306.2	314.8	323.4	332.4	342.1	351.8	361.5	371.1	377.7
67.5°	249.7	258.7	267.9	276.9	286.0	295.5	305.3	315.1	324.9	334.8	342.0
70°	222.1	231.5	240.9	250.3	259.8	269.8	280.3	290.8	301.3	311.9	318.9
72.5°	196.8	206.2	215.7	225.1	234.5	244.7	255.5	266.5	277.3	288.1	295.4
75°	156.9	167.2	177.6	187.8	198.1	208.8	219.7	230.7	241.7	252.7	259.9
77.5°	122.2	132.6	143.0	153.4	163.7	174.5	185.6	196.6	207.6	218.7	226.3
80°	97.7	108.5	119.2	130.0	140.7	151.7	163.2	174.6	186.0	197.4	204.8
82.5°	76.3	87.3	98.2	109.1	120.1	131.3	142.9	154.5	166.1	177.7	185.1
85°	48.4	59.3	70.3	81.2	92.2	103.5	115.2	126.8	138.4	150.1	157.5
87.5°	26.5	37.8	49.1	60.4	71.8	83.3	95.1	106.8	118.5	130.3	137.9
90°	13.8	26.6	39.4	52.3	65.1	78.5	92.4	106.3	120.2	134.1	142.4
92.5°	34.8	45.9	57.0	68.1	79.3	91.1	103.7	116.2	128.8	141.3	149.3
95°	66.4	76.3	86.4	96.4	106.4	117.6	130.1	142.5	155.0	167.3	174.9
97.5°	108.3	117.1	125.9	134.7	143.5	153.6	165.1	176.6	188.0	199.5	207.1
100°	136.9	145.2	153.4	161.6	169.9	179.6	190.8	201.9	213.0	224.1	231.1
102.5°	169.9	177.0	184.1	191.1	198.2	207.4	218.7	230.0	241.3	252.5	259.4
105°	219.6	225.3	230.9	236.7	242.3	250.8	262.1	273.4	284.7	296.1	302.2
107.5°	276.4	281.1	285.8	290.5	295.3	302.5	312.2	321.9	331.6	341.3	347.8
110°	311.7	316.0	320.5	324.8	329.1	335.9	345.2	354.3	363.5	372.7	379.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	349.3	352.8	356.3	359.9	363.4	369.3	377.9	386.3	394.8	403.3	409.9
115°	404.8	408.0	411.3	414.5	417.8	423.2	430.6	438.2	445.6	453.1	458.5
117.5°	461.5	463.4	465.5	467.6	469.6	474.0	480.9	487.8	494.6	501.5	506.7
120°	496.1	498.3	500.7	503.0	505.4	509.7	515.9	522.1	528.3	534.4	539.3
122.5°	532.9	534.4	535.8	537.3	538.9	542.8	549.1	555.4	561.8	568.2	572.5
125°	588.1	588.8	589.5	590.0	590.7	594.0	599.9	605.9	611.8	617.7	621.5
127.5°	640.1	641.2	642.3	643.5	644.6	647.5	652.3	657.1	661.9	666.8	670.0
130°	674.8	676.2	677.6	679.1	680.5	683.2	686.9	690.7	694.5	698.1	701.5
132.5°	708.6	710.2	711.8	713.4	715.1	717.5	720.5	723.5	726.6	729.6	732.6
135°	761.2	762.2	763.3	764.3	765.3	767.0	769.2	771.4	773.6	775.8	778.9
137.5°	809.9	810.9	811.7	812.6	813.4	814.8	816.7	818.6	820.6	822.5	825.0
140°	843.0	844.1	845.2	846.2	847.3	848.2	849.0	849.9	850.8	851.7	854.7
142.5°	873.9	874.8	875.6	876.6	877.4	878.1	878.5	879.1	879.6	880.1	882.9
145°	922.1	922.3	922.5	922.7	922.8	923.3	923.9	924.5	925.2	925.8	927.4
147.5°	963.3	964.0	964.8	965.5	966.3	967.0	967.5	968.1	968.7	969.3	969.8
150°	992.6	993.1	993.4	993.8	994.3	994.7	995.1	995.5	996.0	996.4	996.4
152.5°	1016.7	1017.3	1017.9	1018.4	1019.0	1019.5	1019.7	1019.9	1020.2	1020.5	1020.8
155°	1054.7	1054.7	1054.7	1054.7	1054.7	1054.8	1055.0	1055.2	1055.5	1055.6	1056.5
157.5°	1087.0	1086.8	1086.6	1086.3	1086.1	1086.0	1086.2	1086.4	1086.6	1086.7	1087.6
160°	1107.4	1106.9	1106.5	1106.2	1105.7	1105.5	1105.5	1105.5	1105.5	1105.5	1106.5
162.5°	1125.5	1124.8	1124.3	1123.7	1123.1	1122.9	1123.0	1123.2	1123.4	1123.6	1124.6
165°	1148.8	1148.1	1147.5	1146.9	1146.3	1145.9	1145.9	1145.9	1145.9	1145.9	1147.2
167.5°	1167.4	1166.6	1165.7	1164.9	1164.0	1163.8	1163.9	1164.0	1164.2	1164.4	1165.7
170°	1178.0	1177.1	1176.3	1175.4	1174.6	1174.2	1174.2	1174.2	1174.2	1174.2	1175.6
172.5°	1186.2	1185.4	1184.6	1183.7	1182.9	1182.4	1182.4	1182.4	1182.4	1182.4	1183.7
175°	1194.9	1194.0	1193.2	1192.4	1191.6	1191.1	1191.1	1191.1	1191.1	1191.1	1192.4
177.5°	1198.4	1197.8	1197.1	1196.5	1195.8	1195.4	1195.4	1195.4	1195.4	1195.4	1196.5
180°	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	904.1	905.5	906.8	907.5	907.3	907.1	906.9	906.8
5°	902.6	904.4	906.1	906.8	906.6	906.4	906.3	906.0
7.5°	897.1	899.4	901.5	902.5	902.2	902.0	901.7	901.4
10°	891.6	893.8	896.0	896.9	896.5	896.0	895.6	895.1
12.5°	884.2	886.2	888.2	889.0	888.5	888.2	887.7	887.2
15°	869.9	872.1	874.3	875.2	875.1	874.9	874.6	874.4
17.5°	851.3	853.3	855.3	856.1	855.8	855.5	855.2	854.9
20°	837.9	839.9	841.9	842.9	843.2	843.4	843.6	843.9
22.5°	823.1	825.7	828.1	829.3	829.2	829.1	829.0	828.8
25°	798.2	801.1	803.9	805.3	805.3	805.3	805.3	805.3
27.5°	772.1	774.6	777.0	778.4	778.5	778.7	778.9	779.1
30°	754.3	757.0	759.6	760.9	760.9	760.9	760.9	760.9
32.5°	734.9	737.7	740.6	742.3	742.7	743.3	743.8	744.3
35°	706.3	709.6	712.8	715.0	715.9	716.7	717.6	718.5
37.5°	676.6	680.3	684.0	686.3	686.9	687.7	688.3	689.1
40°	656.9	660.5	664.3	666.6	667.5	668.4	669.2	670.1
42.5°	636.2	640.3	644.4	647.1	648.3	649.5	650.7	652.0
45°	605.4	609.5	613.8	616.7	618.5	620.2	622.0	623.8
47.5°	574.3	579.0	583.7	586.7	588.1	589.5	590.8	592.1
50°	552.9	557.9	563.0	566.3	567.8	569.3	570.9	572.4
52.5°	531.1	536.4	541.6	545.2	547.1	548.9	550.8	552.7
55°	498.4	504.4	510.2	514.1	515.9	517.6	519.3	521.1
57.5°	465.0	470.9	476.8	480.9	483.0	485.0	487.0	489.1
60°	441.6	447.7	453.8	458.2	460.5	463.0	465.4	467.8
62.5°	419.5	425.7	431.8	435.9	438.2	440.5	442.7	444.9
65°	384.3	390.8	397.4	401.8	404.0	406.1	408.4	410.6
67.5°	349.1	356.4	363.5	368.1	369.9	371.7	373.6	375.4
70°	325.9	332.9	340.0	344.5	346.8	348.9	351.1	353.4
72.5°	302.6	309.7	317.0	321.7	323.9	326.0	328.2	330.5
75°	267.1	274.4	281.6	286.5	289.2	291.8	294.5	297.1
77.5°	233.9	241.6	249.2	254.0	256.1	258.1	260.1	262.1
80°	212.3	219.7	227.2	232.1	234.2	236.4	238.7	240.8
82.5°	192.6	200.0	207.5	212.3	214.5	216.7	218.9	221.0
85°	164.9	172.4	179.8	184.6	186.8	189.1	191.2	193.4
87.5°	145.5	153.2	160.7	165.7	168.0	170.2	172.5	174.8
90°	150.7	159.0	167.3	172.8	175.3	178.0	180.6	183.1
92.5°	157.2	165.2	173.1	178.0	179.7	181.5	183.3	185.0
95°	182.6	190.2	197.8	202.7	205.0	207.2	209.3	211.6
97.5°	214.5	222.1	229.5	234.3	236.5	238.6	240.6	242.8
100°	238.2	245.2	252.1	256.9	259.5	262.1	264.8	267.4
102.5°	266.2	273.0	279.8	284.3	286.3	288.5	290.6	292.7
105°	308.3	314.5	320.7	324.9	327.3	329.7	332.1	334.4
107.5°	354.4	360.9	367.5	371.6	373.2	374.9	376.6	378.3
110°	385.8	392.3	398.9	402.7	404.2	405.5	406.8	408.1





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CATALOG NUMBER: S123DIP-S775D1025U830-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	416.4	422.9	429.4	433.7	435.5	437.3	439.2	441.0
115°	464.0	469.6	475.0	478.5	480.0	481.6	483.1	484.7
117.5°	511.9	517.1	522.3	525.4	526.5	527.6	528.8	529.9
120°	544.1	548.9	553.8	556.8	557.9	559.0	560.2	561.3
122.5°	576.8	581.1	585.4	588.1	589.0	589.9	591.0	591.9
125°	625.3	629.1	632.8	635.1	635.7	636.4	637.2	637.8
127.5°	673.1	676.3	679.5	681.3	681.8	682.4	682.9	683.4
130°	704.8	708.1	711.5	713.1	712.9	712.8	712.7	712.5
132.5°	735.6	738.6	741.6	743.2	743.6	743.9	744.3	744.7
135°	782.0	785.1	788.2	790.1	790.8	791.5	792.2	792.9
137.5°	827.6	830.2	832.8	834.2	834.5	834.8	835.2	835.5
140°	857.8	860.9	863.9	865.3	865.0	864.6	864.2	863.8
142.5°	885.6	888.3	891.0	892.4	892.3	892.3	892.3	892.2
145°	928.9	930.5	932.0	932.7	932.8	932.8	932.9	932.9
147.5°	970.3	970.8	971.4	971.4	970.9	970.4	970.0	969.5
150°	996.4	996.4	996.4	996.0	995.1	994.3	993.5	992.7
152.5°	1021.2	1021.4	1021.8	1021.4	1020.5	1019.5	1018.4	1017.5
155°	1057.3	1058.2	1058.9	1058.7	1057.2	1055.7	1054.2	1052.8
157.5°	1088.4	1089.3	1090.2	1090.1	1088.9	1087.7	1086.6	1085.3
160°	1107.6	1108.6	1109.7	1109.7	1109.0	1108.1	1107.3	1106.5
162.5°	1125.7	1126.7	1127.8	1127.6	1126.2	1124.9	1123.6	1122.3
165°	1148.5	1149.7	1150.9	1150.8	1149.4	1147.9	1146.5	1145.0
167.5°	1167.0	1168.3	1169.6	1169.6	1168.3	1167.0	1165.7	1164.4
170°	1177.1	1178.6	1180.1	1180.1	1178.6	1177.1	1175.6	1174.2
172.5°	1185.1	1186.4	1187.6	1187.6	1186.1	1184.7	1183.2	1181.7
175°	1193.6	1194.9	1196.2	1196.0	1194.6	1193.1	1191.7	1190.1
177.5°	1197.5	1198.4	1199.5	1199.4	1198.3	1197.0	1195.9	1194.7
180°	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7

(END OF REPORT)