

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: P332155-830

Luminaire Tested: **S123DIW-S775D460U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332155-830
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: S123DIW-S775D460U830-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 460 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4494.8 lumens
Efficiency: N/A
Efficacy: 119.2 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: Semi-Direct

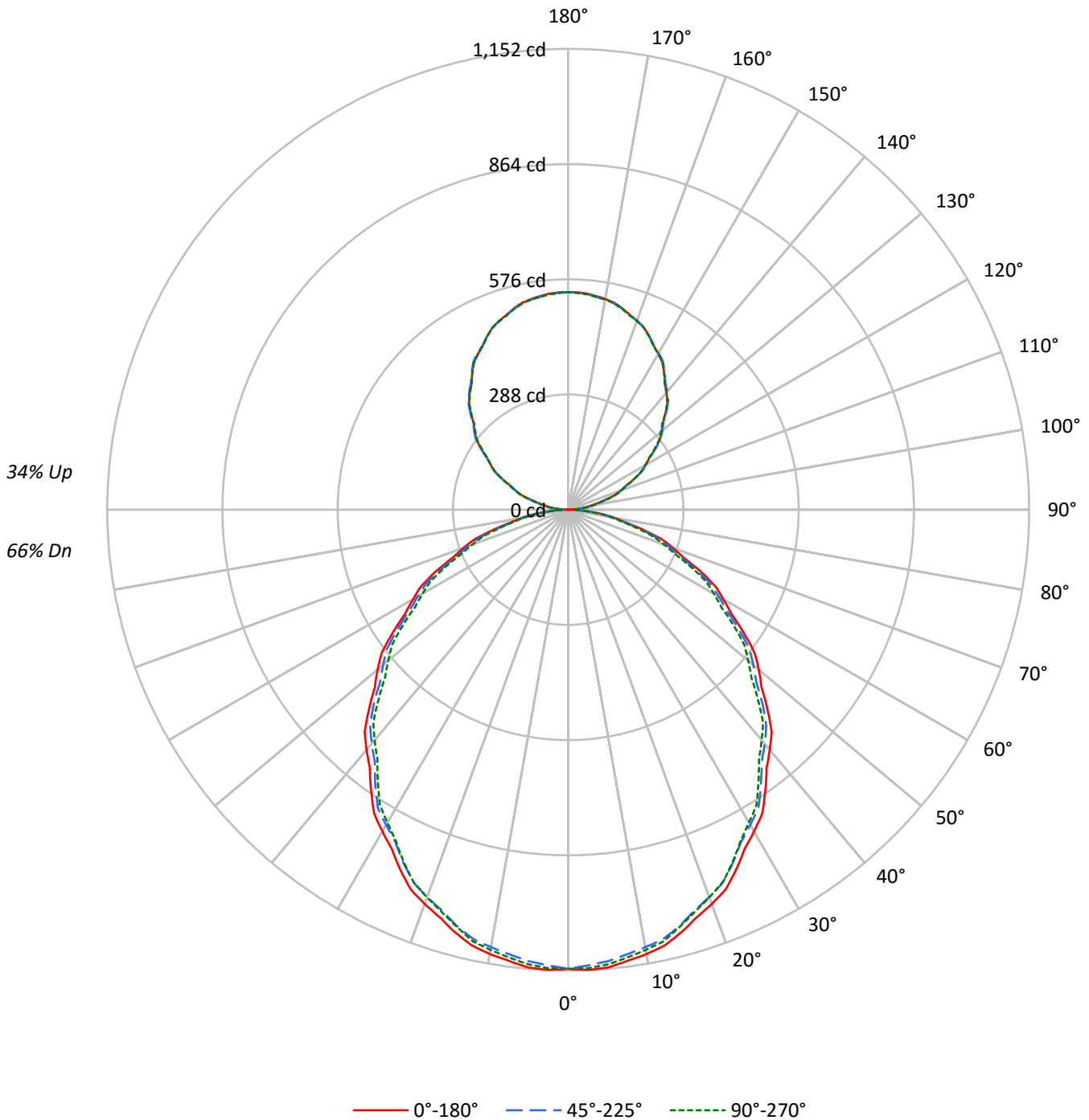
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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									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	111	111	111	111	105	105	105	105	92	92	92	81	81	81	71	71	71	66																				
1	101	97	93	89	95	91	88	85	81	78	76	72	70	68	63	61	60	56																				
2	92	85	78	73	87	80	74	69	71	67	63	63	59	57	55	53	51	47																				
3	84	74	67	61	79	70	64	58	63	57	53	56	51	48	49	46	43	40																				
4	77	66	58	51	72	62	55	49	56	50	45	50	45	41	44	40	37	34																				
5	71	59	50	44	66	56	48	42	50	44	39	44	39	36	39	35	32	29																				
6	65	53	44	38	61	50	43	37	45	39	34	40	35	31	36	32	28	26																				
7	60	48	40	34	57	45	38	33	41	35	30	37	32	28	33	28	25	23																				
8	56	43	36	30	53	41	34	29	37	31	27	34	28	25	30	26	23	20																				
9	52	40	32	27	49	38	31	26	34	28	24	31	26	22	28	24	20	18																				
10	49	37	29	24	46	35	28	23	32	26	22	29	24	20	26	22	19	17																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12355	12355	12355
5°	12413	12241	12327
10°	12329	12136	12211
15°	12186	11999	12021
20°	12016	11802	11813
25°	11792	11569	11545
30°	11543	11309	11225
35°	11284	11037	10893
40°	11011	10732	10568
45°	10712	10456	10201
50°	10412	10114	9833
55°	10021	9760	9466
60°	9623	9347	9052
65°	9276	8899	8621
70°	8759	8387	8013
75°	8006	7719	7390
80°	7221	6912	6856
85°	6336	6101	5854



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	2.4
10°-20°	305.3	6.8
20°-30°	451.0	10.0
30°-40°	526.8	11.7
40°-50°	529.6	11.8
50°-60°	465.2	10.3
60°-70°	346.6	7.7
70°-80°	197.5	4.4
80°-90°	58.3	1.3
90°-100°	35.4	0.8
100°-110°	106.0	2.4
110°-120°	180.3	4.0
120°-130°	237.2	5.3
130°-140°	266.6	5.9
140°-150°	262.1	5.8
150°-160°	220.6	4.9
160°-170°	146.9	3.3
170°-180°	51.4	1.1
0°-30°	864.4	19.2
0°-40°	1391.1	30.9
0°-60°	2385.9	53.1
0°-90°	2988.3	66.5
90°-120°	321.8	7.2
90°-150°	1087.6	24.2
90°-180°	1507.0	33.5
0°-180°	4494.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1148	1148	1148	1148	1148	
5°	1149	1143	1133	1142	1141	109
15°	1094	1089	1077	1084	1079	308
25°	993	987	974	975	972	457
35°	859	852	840	834	829	537
45°	704	699	687	675	670	543
55°	534	532	520	510	504	478
65°	364	359	349	342	338	359
75°	192	189	186	181	178	206
85°	51	50	49	48	47	56
90°	0	5	10	12	13	4
95°	25	28	32	33	33	28
105°	96	97	101	101	102	103
115°	182	183	182	182	182	180
125°	266	267	266	264	263	237
135°	345	347	347	345	344	266
145°	418	419	420	420	418	261
155°	479	479	479	481	478	220
165°	522	520	520	522	520	147
175°	542	541	541	543	540	52
180°	544	544	544	544	544	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8
2.5°	1151.7	1151.0	1150.4	1149.6	1149.0	1147.6	1145.7	1143.8	1141.8	1139.9	1141.6
5°	1148.8	1147.6	1146.6	1145.5	1144.3	1142.6	1140.2	1137.8	1135.4	1132.9	1135.2
7.5°	1137.6	1136.4	1135.3	1134.3	1133.1	1131.3	1128.8	1126.3	1123.8	1121.3	1123.3
10°	1128.0	1126.9	1125.9	1124.7	1123.7	1121.7	1118.8	1116.0	1113.1	1110.3	1112.3
12.5°	1115.4	1114.5	1113.6	1112.7	1111.7	1109.9	1107.3	1104.6	1101.9	1099.2	1100.7
15°	1093.5	1092.6	1091.7	1090.9	1090.0	1088.2	1085.2	1082.4	1079.6	1076.8	1078.5
17.5°	1068.0	1066.9	1065.7	1064.6	1063.5	1061.5	1058.7	1055.7	1052.9	1050.1	1051.3
20°	1049.0	1047.7	1046.5	1045.2	1043.9	1041.7	1038.9	1036.0	1033.2	1030.3	1031.2
22.5°	1027.7	1026.4	1025.1	1023.8	1022.5	1020.4	1017.6	1014.7	1011.9	1009.0	1009.7
25°	992.9	991.6	990.2	988.9	987.6	985.5	982.6	979.8	976.9	974.1	974.3
27.5°	955.5	954.2	953.0	951.7	950.5	948.3	945.2	942.2	939.1	935.9	936.1
30°	928.7	927.6	926.5	925.4	924.3	922.2	919.2	916.1	913.0	909.9	909.9
32.5°	901.8	900.4	898.9	897.5	896.1	894.2	891.7	889.4	887.0	884.7	883.4
35°	858.7	857.3	856.0	854.7	853.4	851.3	848.4	845.6	842.7	839.9	838.6
37.5°	814.4	812.8	811.1	809.4	807.8	805.5	802.6	799.7	796.7	793.9	792.3
40°	783.6	782.3	781.0	779.7	778.4	776.2	773.1	770.1	766.9	763.8	762.1
42.5°	752.8	751.3	749.8	748.4	746.9	744.6	741.5	738.4	735.4	732.3	730.6
45°	703.7	702.8	701.9	701.1	700.1	698.3	695.4	692.6	689.8	686.9	684.3
47.5°	654.9	653.7	652.3	651.1	649.8	647.8	645.2	642.5	639.8	637.2	634.5
50°	621.8	620.7	619.5	618.5	617.4	615.4	612.6	609.7	606.8	604.0	601.6
52.5°	587.0	586.3	585.5	584.8	584.0	582.1	579.1	576.1	573.1	570.0	568.0
55°	534.0	533.7	533.5	533.3	533.0	531.5	528.7	525.8	522.9	520.1	517.7
57.5°	483.4	482.7	481.9	481.2	480.4	478.9	476.6	474.3	472.0	469.8	467.6
60°	447.0	446.9	446.7	446.4	446.2	444.8	442.1	439.5	436.9	434.2	432.3
62.5°	414.7	414.2	413.6	413.0	412.5	410.9	408.2	405.6	402.9	400.3	398.3
65°	364.2	363.1	361.9	360.9	359.8	358.2	355.9	353.7	351.6	349.4	347.6
67.5°	310.7	309.7	308.8	307.7	306.8	305.5	303.9	302.2	300.5	298.9	297.3
70°	278.3	277.0	275.7	274.4	273.1	271.7	270.4	269.1	267.8	266.5	264.9
72.5°	244.4	243.4	242.4	241.5	240.5	239.3	237.8	236.3	234.8	233.3	232.0
75°	192.5	191.5	190.7	189.8	189.0	188.1	187.5	186.8	186.2	185.6	184.5
77.5°	146.5	146.0	145.5	145.1	144.5	143.9	143.1	142.3	141.6	140.7	140.0
80°	116.5	115.8	115.2	114.5	113.9	113.3	112.8	112.4	112.0	111.5	111.3
82.5°	87.3	87.1	87.0	86.8	86.7	86.6	86.5	86.4	86.3	86.2	85.9
85°	51.3	50.9	50.4	50.0	49.6	49.4	49.4	49.4	49.4	49.4	48.9
87.5°	20.6	20.3	20.0	19.6	19.2	19.1	19.2	19.3	19.3	19.4	19.3
90°	0.5	1.4	2.4	3.3	4.2	5.3	6.5	7.8	9.0	10.3	10.7
92.5°	10.4	11.0	11.6	12.3	12.9	13.6	14.3	15.0	15.7	16.4	16.7
95°	25.2	25.8	26.5	27.2	27.9	28.6	29.3	30.1	30.8	31.6	32.0
97.5°	44.8	45.2	45.7	46.3	46.8	47.2	47.8	48.4	48.9	49.5	49.9
100°	58.1	58.6	59.2	59.8	60.3	60.9	61.4	61.8	62.3	62.8	63.1
102.5°	73.4	73.8	74.2	74.5	74.8	75.3	76.0	76.5	77.2	77.9	78.1
105°	96.1	96.3	96.5	96.7	96.9	97.4	98.2	99.1	99.9	100.8	100.8
107.5°	122.4	122.5	122.6	122.7	122.9	123.1	123.5	123.8	124.1	124.5	124.8
110°	138.8	139.0	139.2	139.4	139.6	139.8	140.0	140.2	140.3	140.5	140.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	155.9	156.0	156.2	156.3	156.4	156.5	156.5	156.6	156.6	156.6	157.0
115°	181.5	181.8	182.1	182.4	182.7	182.8	182.6	182.4	182.2	182.0	182.1
117.5°	207.4	207.5	207.7	207.9	208.1	208.0	207.8	207.5	207.4	207.1	207.1
120°	223.4	223.9	224.5	225.1	225.6	225.7	225.3	224.8	224.3	223.9	223.8
122.5°	240.2	240.5	241.0	241.4	241.8	241.9	241.7	241.4	241.2	240.9	240.6
125°	265.7	266.0	266.3	266.6	266.8	266.8	266.6	266.5	266.3	266.1	265.7
127.5°	289.3	289.8	290.5	291.1	291.7	291.9	291.7	291.4	291.2	291.1	290.5
130°	305.0	305.8	306.5	307.3	308.0	308.2	307.9	307.6	307.4	307.1	306.7
132.5°	320.7	321.4	322.3	323.0	323.8	324.0	323.8	323.6	323.4	323.2	322.7
135°	344.7	345.3	345.8	346.4	346.9	347.2	347.1	347.0	346.9	346.9	346.5
137.5°	366.9	367.4	367.9	368.3	368.8	369.2	369.4	369.7	369.9	370.1	369.8
140°	382.3	382.8	383.2	383.7	384.2	384.5	384.6	384.7	384.7	384.8	384.7
142.5°	396.3	396.8	397.3	397.8	398.2	398.5	398.7	398.9	399.1	399.2	399.1
145°	418.2	418.4	418.6	418.8	419.0	419.1	419.4	419.7	420.0	420.3	420.2
147.5°	437.3	437.6	438.0	438.3	438.7	438.9	439.2	439.5	439.8	440.1	440.1
150°	450.6	450.8	451.0	451.2	451.4	451.6	451.8	451.9	452.1	452.3	452.3
152.5°	461.6	461.8	462.1	462.3	462.6	462.8	462.9	463.1	463.2	463.3	463.4
155°	478.8	478.8	478.8	478.8	478.8	478.9	479.0	479.1	479.2	479.3	479.7
157.5°	493.5	493.4	493.3	493.1	493.0	493.0	493.1	493.2	493.2	493.3	493.7
160°	502.8	502.6	502.4	502.2	502.0	501.9	501.9	501.9	501.9	501.9	502.4
162.5°	511.0	510.7	510.4	510.1	509.9	509.8	509.8	509.9	510.0	510.1	510.6
165°	521.5	521.2	520.9	520.7	520.4	520.3	520.3	520.3	520.3	520.3	520.8
167.5°	530.0	529.6	529.2	528.9	528.5	528.3	528.4	528.5	528.6	528.6	529.2
170°	534.8	534.4	534.0	533.7	533.3	533.1	533.1	533.1	533.1	533.1	533.8
172.5°	538.6	538.2	537.8	537.4	537.0	536.8	536.8	536.8	536.8	536.8	537.4
175°	542.4	542.1	541.7	541.3	540.9	540.7	540.7	540.7	540.7	540.7	541.3
177.5°	544.1	543.8	543.5	543.2	542.9	542.7	542.7	542.7	542.7	542.7	543.2
180°	543.8	543.8	543.8	543.8	543.8	543.8	543.8	543.8	543.8	543.8	543.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8
2.5°	1143.4	1145.2	1146.9	1147.7	1147.5	1147.4	1147.2	1147.0
5°	1137.4	1139.5	1141.8	1142.6	1142.2	1141.8	1141.3	1140.9
7.5°	1125.3	1127.3	1129.3	1130.1	1129.8	1129.5	1129.3	1129.1
10°	1114.3	1116.2	1118.1	1119.0	1118.5	1118.0	1117.7	1117.2
12.5°	1102.1	1103.5	1105.0	1105.6	1105.3	1105.0	1104.8	1104.6
15°	1080.2	1081.9	1083.7	1083.9	1082.6	1081.3	1080.1	1078.7
17.5°	1052.5	1053.8	1055.0	1055.4	1054.9	1054.4	1054.0	1053.5
20°	1032.1	1032.9	1033.9	1034.0	1033.3	1032.6	1032.0	1031.3
22.5°	1010.4	1011.2	1011.8	1011.7	1011.0	1010.1	1009.3	1008.4
25°	974.5	974.8	975.0	974.8	974.1	973.5	972.8	972.1
27.5°	936.3	936.5	936.7	936.3	935.6	934.7	933.9	933.0
30°	909.9	909.9	909.9	909.2	907.7	906.1	904.6	903.1
32.5°	882.2	881.0	879.8	878.7	877.9	877.0	876.2	875.4
35°	837.3	835.9	834.6	833.4	832.3	831.2	830.1	829.0
37.5°	790.7	789.1	787.6	786.5	785.7	785.0	784.3	783.6
40°	760.3	758.7	756.9	755.5	754.7	753.8	752.9	752.1
42.5°	728.8	727.0	725.3	724.0	723.1	722.2	721.3	720.5
45°	681.6	679.0	676.4	674.5	673.4	672.3	671.2	670.1
47.5°	632.0	629.4	626.8	625.0	624.1	623.1	622.2	621.1
50°	599.2	596.7	594.4	592.5	591.2	589.8	588.5	587.2
52.5°	565.9	563.8	561.8	560.2	558.8	557.5	556.2	554.9
55°	515.3	512.8	510.5	508.7	507.6	506.5	505.4	504.4
57.5°	465.4	463.4	461.2	459.5	458.2	456.9	455.6	454.4
60°	430.3	428.3	426.3	424.8	423.7	422.6	421.5	420.5
62.5°	396.3	394.4	392.4	391.1	390.3	389.6	388.8	388.0
65°	345.8	344.1	342.3	341.1	340.4	339.8	339.1	338.5
67.5°	295.8	294.3	292.7	291.4	290.6	289.6	288.7	287.8
70°	263.4	261.8	260.3	259.0	257.9	256.8	255.7	254.6
72.5°	230.5	229.2	227.9	226.9	226.3	225.7	225.2	224.6
75°	183.3	182.3	181.2	180.3	179.6	179.0	178.3	177.7
77.5°	139.2	138.5	137.7	137.4	137.4	137.4	137.4	137.4
80°	111.1	110.8	110.7	110.6	110.6	110.6	110.6	110.6
82.5°	85.5	85.1	84.6	84.4	84.3	84.1	83.9	83.7
85°	48.4	48.1	47.6	47.4	47.4	47.4	47.4	47.4
87.5°	19.2	19.1	19.0	18.9	19.0	19.0	19.1	19.1
90°	11.0	11.4	11.8	12.1	12.3	12.4	12.6	12.8
92.5°	17.0	17.3	17.6	17.7	17.6	17.4	17.3	17.2
95°	32.3	32.7	33.1	33.3	33.3	33.3	33.3	33.3
97.5°	50.3	50.8	51.2	51.4	51.4	51.4	51.3	51.3
100°	63.3	63.6	63.9	64.2	64.4	64.6	64.8	64.9
102.5°	78.4	78.7	79.0	79.1	79.1	79.0	79.0	78.9
105°	100.8	100.8	100.8	100.9	101.1	101.3	101.5	101.7
107.5°	125.1	125.4	125.6	125.7	125.6	125.5	125.5	125.4
110°	141.3	141.7	142.0	142.1	141.9	141.8	141.6	141.4



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CATALOG NUMBER: S123DIW-S775D460U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	157.5	158.0	158.4	158.6	158.5	158.5	158.5	158.4
115°	182.2	182.3	182.4	182.4	182.3	182.2	182.1	182.0
117.5°	207.1	207.0	207.0	206.9	206.6	206.3	206.0	205.8
120°	223.7	223.6	223.5	223.3	223.1	222.9	222.7	222.5
122.5°	240.4	240.2	239.9	239.7	239.4	239.1	238.8	238.6
125°	265.3	264.9	264.6	264.2	263.8	263.4	263.1	262.7
127.5°	290.0	289.5	288.9	288.4	288.0	287.6	287.1	286.7
130°	306.3	305.9	305.6	305.1	304.4	303.8	303.1	302.4
132.5°	322.3	321.8	321.3	320.8	320.4	319.8	319.3	318.8
135°	346.1	345.7	345.3	345.1	344.9	344.7	344.5	344.3
137.5°	369.4	369.0	368.5	368.2	367.8	367.5	367.1	366.7
140°	384.7	384.6	384.5	384.1	383.4	382.8	382.1	381.4
142.5°	399.0	398.9	398.8	398.5	398.0	397.5	397.0	396.4
145°	420.1	420.0	419.9	419.7	419.3	419.0	418.6	418.2
147.5°	440.1	440.1	440.1	439.8	439.2	438.6	438.0	437.4
150°	452.3	452.3	452.3	452.0	451.5	450.9	450.3	449.8
152.5°	463.5	463.7	463.9	463.7	463.3	462.7	462.2	461.8
155°	480.0	480.4	480.8	480.6	479.9	479.3	478.6	478.0
157.5°	494.2	494.6	494.9	494.8	494.4	493.8	493.2	492.8
160°	502.8	503.3	503.8	503.8	503.4	503.0	502.7	502.3
162.5°	511.0	511.5	512.0	511.9	511.3	510.7	510.1	509.4
165°	521.4	522.0	522.5	522.5	521.8	521.1	520.5	519.8
167.5°	529.8	530.4	530.9	530.9	530.4	529.8	529.2	528.6
170°	534.4	535.1	535.7	535.7	535.1	534.4	533.8	533.1
172.5°	538.0	538.6	539.1	539.1	538.5	537.8	537.2	536.5
175°	541.9	542.4	543.0	543.0	542.3	541.7	541.0	540.4
177.5°	543.7	544.1	544.5	544.5	543.9	543.5	542.9	542.3
180°	543.8	543.8	543.8	543.8	543.8	543.8	543.8	543.8

(END OF REPORT)