

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: P331796

Luminaire Tested: **S122RDIW-S485D970U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331796  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122RDIW-S485D970U835-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 970 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5058.2 lumens  
Efficiency: N/A  
Efficacy: 111.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

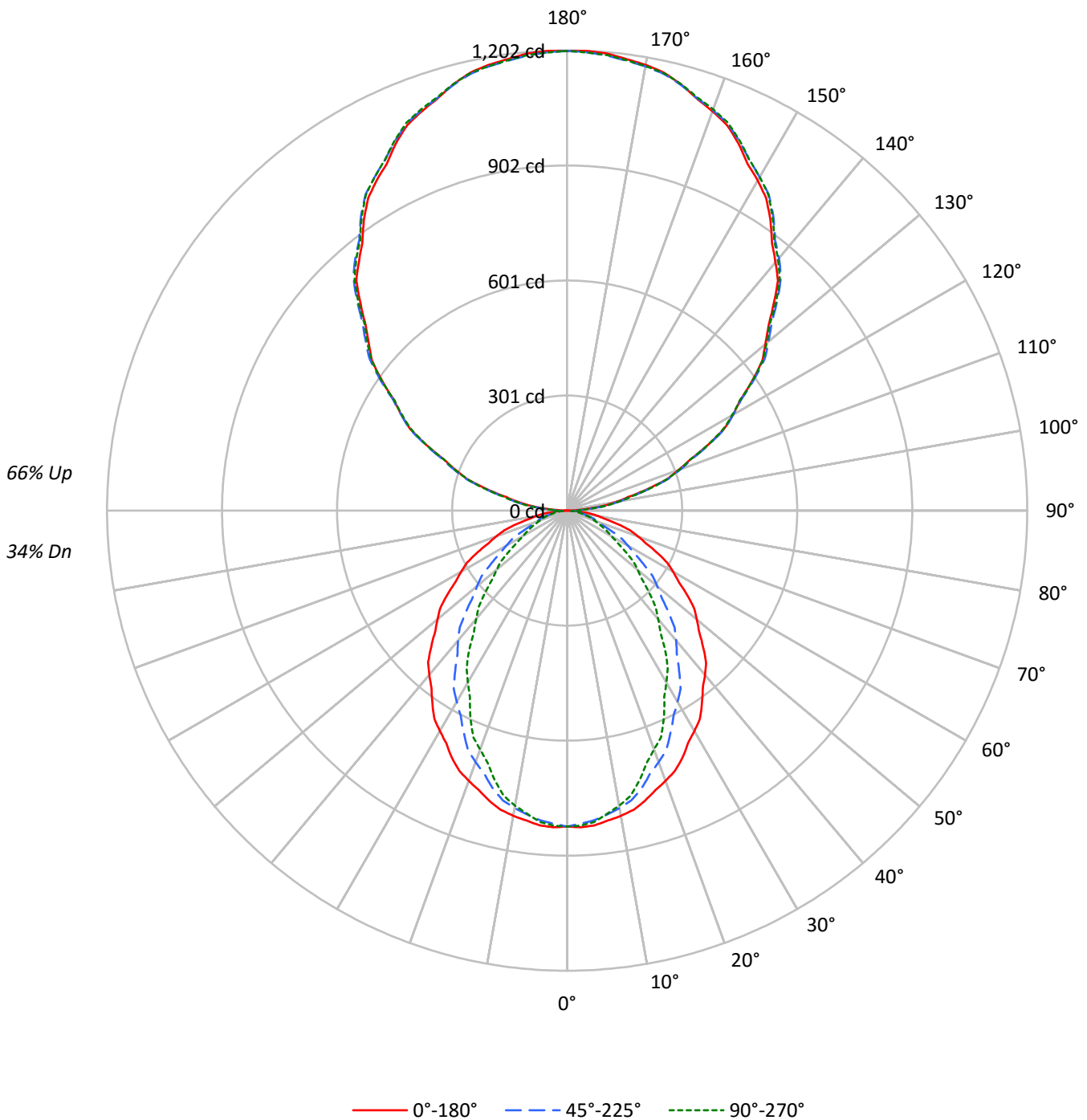
Input Watts (W): 45.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	34				
1	94	90	87	83	85	82	79	76	65	63	61	50	49	48	37	36	35	29				
2	86	79	73	69	78	72	67	63	58	54	51	45	42	40	33	31	30	25				
3	79	70	63	57	71	63	57	53	51	47	43	40	37	35	29	28	26	21				
4	72	62	54	49	65	56	50	45	46	41	37	36	32	30	26	24	23	19				
5	66	55	48	42	60	50	44	39	41	36	32	32	29	26	24	22	20	16				
6	61	50	42	36	55	45	38	34	37	32	28	29	26	23	22	19	18	15				
7	56	45	37	32	51	41	34	29	33	28	25	26	23	20	20	18	16	13				
8	52	41	33	28	47	37	31	26	30	26	22	24	21	18	18	16	14	12				
9	49	37	30	25	44	34	28	23	28	23	20	22	19	16	17	15	13	11				
10	45	34	27	22	41	31	25	21	26	21	18	21	17	15	16	13	12	10				

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

	0°	45°	90°
0°	13324	13324	13324
5°	13374	13157	13230
10°	13273	12942	12832
15°	13120	12558	12197
20°	12909	12010	11407
25°	12693	11389	10644
30°	12392	10750	9663
35°	12100	10054	8803
40°	11805	9335	7807
45°	11460	8526	6907
50°	11105	7709	6021
55°	10742	6832	5171
60°	10320	5909	4292
65°	9845	4963	3908
70°	9272	4088	3597
75°	8571	3724	3356
80°	7569	3329	3059
85°	5947	2631	2631



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.2	1.5
10°-20°	212.1	4.2
20°-30°	297.8	5.9
30°-40°	324.8	6.4
40°-50°	298.6	5.9
50°-60°	234.5	4.6
60°-70°	152.9	3.0
70°-80°	78.8	1.6
80°-90°	25.2	0.5
90°-100°	76.0	1.5
100°-110°	236.2	4.7
110°-120°	403.8	8.0
120°-130°	531.0	10.5
130°-140°	595.9	11.8
140°-150°	584.3	11.6
150°-160°	490.1	9.7
160°-170°	325.1	6.4
170°-180°	113.6	2.2
0°-30°	587.2	11.6
0°-40°	912.0	18.0
0°-60°	1445.1	28.6
0°-90°	1702.1	33.7
90°-120°	716.0	14.2
90°-150°	2427.3	48.0
90°-180°	3356.0	66.3
0°-180°	5058.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	825	825	825	825	825	
5°	825	821	812	818	816	78
15°	785	776	751	738	730	221
25°	712	687	639	610	598	327
35°	614	574	510	465	447	384
45°	502	450	373	322	302	387
55°	382	322	243	200	184	341
65°	258	197	130	106	102	255
75°	137	87	60	55	54	145
85°	32	17	14	14	14	38
90°	1	14	35	34	34	4
95°	53	62	65	65	63	60
105°	218	221	223	225	225	230
115°	405	411	409	408	405	401
125°	590	598	596	593	592	527
135°	763	773	776	775	772	589
145°	926	933	939	940	936	578
155°	1058	1061	1064	1069	1066	487
165°	1152	1151	1151	1157	1153	325
175°	1198	1195	1193	1200	1194	114
180°	1200	1200	1200	1200	1200	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2
2.5°	828.2	827.6	826.9	826.2	825.6	824.5	823.1	821.6	820.1	818.7	820.0
5°	825.2	824.4	823.6	822.8	821.9	820.4	818.3	816.1	814.0	811.8	813.3
7.5°	816.7	815.7	814.7	813.6	812.6	810.8	808.3	805.8	803.3	800.8	801.2
10°	809.6	808.4	807.2	806.1	804.9	802.7	799.4	796.0	792.7	789.4	788.9
12.5°	800.6	799.2	797.7	796.3	794.9	792.1	787.8	783.6	779.3	775.1	774.2
15°	784.9	783.1	781.3	779.4	777.6	773.9	768.2	762.6	757.0	751.3	748.2
17.5°	765.7	762.9	760.1	757.3	754.5	749.5	742.3	735.0	727.8	720.5	716.8
20°	751.3	748.0	744.7	741.4	738.0	732.2	723.9	715.6	707.3	699.0	694.9
22.5°	735.8	732.1	728.3	724.6	720.9	714.4	705.0	695.6	686.3	676.9	671.6
25°	712.5	707.2	701.9	696.5	691.2	683.1	672.1	661.2	650.2	639.3	632.5
27.5°	684.4	678.6	672.8	667.1	661.3	652.2	639.9	627.5	615.2	602.8	594.9
30°	664.7	658.4	652.1	645.8	639.5	629.7	616.4	603.1	589.8	576.6	568.1
32.5°	645.6	638.2	630.8	623.5	616.1	605.6	592.1	578.5	565.0	551.5	541.8
35°	613.9	605.4	597.0	588.5	580.0	568.5	553.9	539.3	524.7	510.1	499.6
37.5°	582.2	572.9	563.6	554.3	545.1	532.6	517.1	501.5	485.9	470.4	458.8
40°	560.1	550.2	540.2	530.3	520.3	507.3	491.2	475.1	459.0	442.9	431.1
42.5°	537.4	526.9	516.4	506.0	495.5	481.9	465.3	448.6	432.0	415.4	403.2
45°	501.9	490.8	479.6	468.5	457.4	443.1	425.7	408.3	390.8	373.4	361.6
47.5°	467.2	455.4	443.7	431.9	420.1	405.2	387.2	369.2	351.2	333.2	321.5
50°	442.1	430.3	418.6	406.8	395.0	380.0	361.7	343.5	325.2	306.9	295.5
52.5°	417.6	405.3	393.0	380.7	368.4	353.3	335.4	317.6	299.7	281.9	270.8
55°	381.6	368.7	355.7	342.8	329.9	314.4	296.5	278.6	260.6	242.7	232.8
57.5°	344.7	331.5	318.2	304.9	291.6	276.4	259.2	241.9	224.7	207.5	198.3
60°	319.6	306.4	293.1	279.8	266.5	251.4	234.3	217.2	200.1	183.0	174.5
62.5°	295.1	281.9	268.6	255.3	242.0	227.3	211.0	194.7	178.4	162.1	154.0
65°	257.7	244.2	230.8	217.3	203.9	189.7	174.8	159.8	144.9	129.9	124.3
67.5°	221.5	208.2	194.8	181.5	168.1	154.7	141.3	127.9	114.4	101.0	98.4
70°	196.4	183.5	170.5	157.6	144.6	132.4	121.0	109.5	98.1	86.6	85.0
72.5°	172.5	160.1	147.7	135.3	122.9	112.1	102.9	93.7	84.5	75.3	73.9
75°	137.4	125.8	114.2	102.6	90.9	82.3	76.7	71.0	65.4	59.7	58.6
77.5°	102.9	92.7	82.5	72.3	62.2	55.7	53.0	50.3	47.5	44.8	44.1
80°	81.4	72.9	64.5	56.0	47.5	42.5	40.8	39.2	37.5	35.8	35.2
82.5°	61.7	55.1	48.5	41.9	35.3	31.4	30.3	29.1	28.0	26.9	26.5
85°	32.1	28.6	25.1	21.7	18.2	16.2	15.7	15.2	14.7	14.2	14.2
87.5°	9.8	9.2	8.7	8.2	7.7	7.9	8.9	9.9	10.9	11.9	11.6
90°	1.0	3.7	6.4	9.1	11.8	15.6	20.6	25.5	30.5	35.4	35.0
92.5°	18.0	20.0	22.0	24.0	26.0	27.5	28.7	29.9	31.0	32.2	32.3
95°	52.7	54.9	57.2	59.4	61.7	63.0	63.5	63.9	64.4	64.8	64.8
97.5°	96.2	98.2	100.2	102.2	104.1	105.6	106.4	107.3	108.1	109.0	109.0
100°	128.6	130.4	132.2	134.0	135.8	137.1	137.7	138.4	139.1	139.8	139.8
102.5°	162.7	164.1	165.5	167.0	168.4	169.6	170.4	171.3	172.1	173.0	173.2
105°	217.8	218.4	219.1	219.8	220.5	221.0	221.5	221.9	222.4	222.8	223.3
107.5°	273.3	274.3	275.2	276.2	277.2	277.7	277.7	277.7	277.7	277.7	277.9
110°	308.9	310.3	311.6	313.0	314.3	315.0	315.0	315.0	315.0	315.0	315.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	347.8	349.2	350.5	351.9	353.2	353.8	353.6	353.4	353.3	353.1	352.5
115°	405.1	406.5	407.8	409.2	410.5	411.0	410.5	410.1	409.6	409.2	409.0
117.5°	462.3	464.1	465.9	467.7	469.5	469.7	468.5	467.2	466.0	464.7	464.2
120°	500.4	502.2	504.0	505.8	507.6	507.6	505.8	504.0	502.2	500.4	500.4
122.5°	535.2	537.4	539.5	541.7	543.8	544.3	543.0	541.8	540.5	539.2	538.7
125°	589.5	591.5	593.5	595.6	597.6	598.3	597.6	596.9	596.2	595.6	594.9
127.5°	642.4	644.9	647.5	650.1	652.6	653.5	652.7	651.9	651.1	650.3	649.4
130°	675.6	678.5	681.4	684.4	687.3	688.5	688.1	687.6	687.2	686.7	686.3
132.5°	712.8	715.2	717.6	720.0	722.4	723.6	723.7	723.8	723.9	724.0	723.0
135°	762.7	765.2	767.6	770.1	772.6	774.0	774.5	774.9	775.4	775.8	775.6
137.5°	815.1	817.2	819.2	821.2	823.2	824.6	825.1	825.7	826.3	826.9	826.7
140°	846.7	848.8	850.8	852.8	854.8	856.4	857.6	858.7	859.8	860.9	860.9
142.5°	879.2	881.2	883.2	885.2	887.3	888.7	889.4	890.2	891.0	891.7	891.9
145°	925.7	927.3	928.9	930.5	932.1	933.5	934.9	936.2	937.6	938.9	939.1
147.5°	967.3	969.2	971.1	972.9	974.8	976.2	977.1	978.0	978.9	979.8	980.3
150°	995.6	997.0	998.3	999.7	1001.0	1002.2	1003.1	1004.0	1004.9	1005.8	1006.4
152.5°	1020.8	1022.1	1023.5	1024.8	1026.2	1027.4	1028.5	1029.5	1030.6	1031.7	1032.5
155°	1058.4	1059.1	1059.8	1060.5	1061.1	1061.8	1062.5	1063.2	1063.8	1064.5	1065.6
157.5°	1090.6	1091.1	1091.5	1092.0	1092.4	1092.9	1093.3	1093.7	1094.1	1094.5	1096.0
160°	1110.1	1110.5	1111.0	1111.4	1111.9	1112.2	1112.5	1112.7	1112.9	1113.1	1114.5
162.5°	1127.9	1128.0	1128.1	1128.2	1128.3	1128.4	1128.7	1128.9	1129.1	1129.3	1130.9
165°	1151.6	1151.4	1151.2	1150.9	1150.7	1150.6	1150.6	1150.6	1150.6	1150.6	1152.2
167.5°	1171.5	1170.8	1170.1	1169.4	1168.8	1168.4	1168.4	1168.3	1168.3	1168.2	1169.8
170°	1182.0	1181.3	1180.7	1180.0	1179.3	1178.9	1178.6	1178.4	1178.2	1178.0	1179.5
172.5°	1189.3	1188.6	1187.9	1187.3	1186.6	1186.1	1185.9	1185.7	1185.5	1185.2	1186.8
175°	1198.2	1197.5	1196.9	1196.2	1195.5	1194.9	1194.5	1194.0	1193.6	1193.1	1194.7
177.5°	1201.9	1201.3	1200.8	1200.2	1199.7	1199.2	1198.9	1198.5	1198.2	1197.8	1198.9
180°	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2
2.5°	821.3	822.7	824.0	824.5	824.3	824.0	823.7	823.5
5°	814.8	816.3	817.8	818.3	817.8	817.3	816.8	816.3
7.5°	801.6	802.0	802.5	802.3	801.4	800.5	799.7	798.8
10°	788.4	787.9	787.4	786.7	785.7	784.7	783.7	782.7
12.5°	773.3	772.4	771.5	770.2	768.5	766.9	765.2	763.6
15°	745.0	741.9	738.7	736.3	734.6	733.0	731.3	729.7
17.5°	713.0	709.3	705.5	702.2	699.4	696.5	693.7	690.8
20°	690.7	686.6	682.4	678.5	674.9	671.2	667.6	663.9
22.5°	666.2	660.9	655.6	651.5	648.8	646.1	643.4	640.6
25°	625.7	618.9	612.1	607.4	604.9	602.4	600.0	597.5
27.5°	587.0	579.0	571.1	565.2	561.2	557.3	553.3	549.4
30°	559.6	551.2	542.7	536.2	531.7	527.3	522.8	518.3
32.5°	532.1	522.5	512.8	505.9	501.7	497.5	493.2	489.0
35°	489.2	478.7	468.3	461.2	457.6	453.9	450.3	446.6
37.5°	447.3	435.8	424.3	416.4	412.3	408.1	403.9	399.7
40°	419.3	407.5	395.7	387.7	383.4	379.1	374.7	370.4
42.5°	391.0	378.8	366.7	358.5	354.3	350.1	345.9	341.7
45°	349.8	338.1	326.3	318.4	314.4	310.4	306.4	302.5
47.5°	309.8	298.1	286.4	278.7	275.1	271.5	267.8	264.2
50°	284.0	272.6	261.1	253.7	250.2	246.7	243.2	239.7
52.5°	259.7	248.7	237.6	230.5	227.3	224.1	220.8	217.6
55°	222.8	212.8	202.9	196.3	193.2	190.0	186.9	183.7
57.5°	189.2	180.1	171.0	165.1	162.4	159.8	157.1	154.4
60°	166.0	157.6	149.1	143.6	140.9	138.2	135.6	132.9
62.5°	145.9	137.9	129.8	125.0	123.4	121.8	120.2	118.6
65°	118.7	113.0	107.4	104.3	103.8	103.3	102.8	102.3
67.5°	95.8	93.2	90.6	89.1	88.5	88.0	87.5	86.9
70°	83.3	81.7	80.0	78.8	78.2	77.5	76.8	76.2
72.5°	72.5	71.1	69.7	68.8	68.4	68.0	67.6	67.2
75°	57.4	56.3	55.1	54.4	54.3	54.1	53.9	53.8
77.5°	43.5	42.8	42.2	41.7	41.4	41.2	40.9	40.6
80°	34.5	33.9	33.2	32.9	32.9	32.9	32.9	32.9
82.5°	26.1	25.7	25.3	25.1	25.1	25.1	25.1	25.1
85°	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
87.5°	11.4	11.2	11.0	10.9	10.9	11.0	11.0	11.1
90°	34.5	34.1	33.6	33.5	33.8	34.0	34.2	34.4
92.5°	32.4	32.5	32.6	32.6	32.7	32.7	32.8	32.8
95°	64.8	64.8	64.8	64.6	64.1	63.7	63.2	62.8
97.5°	109.0	109.0	109.0	109.0	108.9	108.9	108.8	108.8
100°	139.8	139.8	139.8	139.7	139.4	139.2	139.0	138.8
102.5°	173.4	173.5	173.7	173.7	173.5	173.2	173.0	172.8
105°	223.7	224.2	224.6	224.9	224.9	224.9	224.9	224.9
107.5°	278.1	278.3	278.4	278.0	277.0	275.9	274.9	273.9
110°	315.0	315.0	315.0	314.7	314.0	313.3	312.6	312.0





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CATALOG NUMBER: S122RDIW-S485D970U835-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	352.0	351.5	350.9	350.4	349.9	349.4	348.9	348.4
115°	408.7	408.5	408.3	407.8	407.2	406.5	405.8	405.1
117.5°	463.6	463.1	462.5	461.9	461.3	460.6	459.9	459.2
120°	500.4	500.4	500.4	500.0	499.3	498.7	498.0	497.3
122.5°	538.2	537.6	537.1	536.6	536.1	535.6	535.1	534.6
125°	594.2	593.5	592.9	592.4	592.2	592.0	591.7	591.5
127.5°	648.6	647.8	647.0	646.2	645.5	644.8	644.1	643.4
130°	685.8	685.4	684.9	684.2	683.3	682.4	681.5	680.6
132.5°	722.0	721.0	720.0	719.2	718.5	717.7	717.0	716.3
135°	775.4	775.2	774.9	774.5	773.8	773.1	772.5	771.8
137.5°	826.5	826.4	826.2	825.6	824.7	823.8	822.9	822.0
140°	860.9	860.9	860.9	860.5	859.6	858.7	857.8	856.9
142.5°	892.1	892.3	892.4	892.1	891.2	890.3	889.4	888.5
145°	939.4	939.6	939.8	939.5	938.6	937.7	936.8	935.9
147.5°	980.8	981.3	981.8	981.6	980.8	979.9	979.1	978.2
150°	1007.1	1007.8	1008.5	1008.5	1007.8	1007.1	1006.4	1005.8
152.5°	1033.4	1034.3	1035.1	1035.1	1034.3	1033.4	1032.5	1031.7
155°	1066.8	1067.9	1069.0	1069.2	1068.6	1067.9	1067.2	1066.5
157.5°	1097.6	1099.1	1100.6	1100.8	1099.8	1098.7	1097.6	1096.5
160°	1115.8	1117.2	1118.5	1118.8	1117.9	1117.0	1116.1	1115.2
162.5°	1132.4	1133.9	1135.5	1135.7	1134.6	1133.5	1132.4	1131.4
165°	1153.8	1155.3	1156.9	1157.1	1156.0	1154.9	1153.8	1152.6
167.5°	1171.4	1173.0	1174.5	1174.7	1173.6	1172.4	1171.2	1170.1
170°	1181.1	1182.7	1184.3	1184.4	1183.0	1181.7	1180.3	1179.0
172.5°	1188.4	1190.0	1191.5	1191.7	1190.3	1189.0	1187.6	1186.3
175°	1196.3	1197.9	1199.4	1199.6	1198.2	1196.9	1195.5	1194.2
177.5°	1200.0	1201.0	1202.1	1202.1	1201.0	1200.0	1198.9	1197.8
180°	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2

(END OF REPORT)