

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: P331803

Luminaire Tested: **S122RDIW-S485D1440U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331803
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S485D1440U835-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7462.2 lumens
Efficiency: N/A
Efficacy: 123.1 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

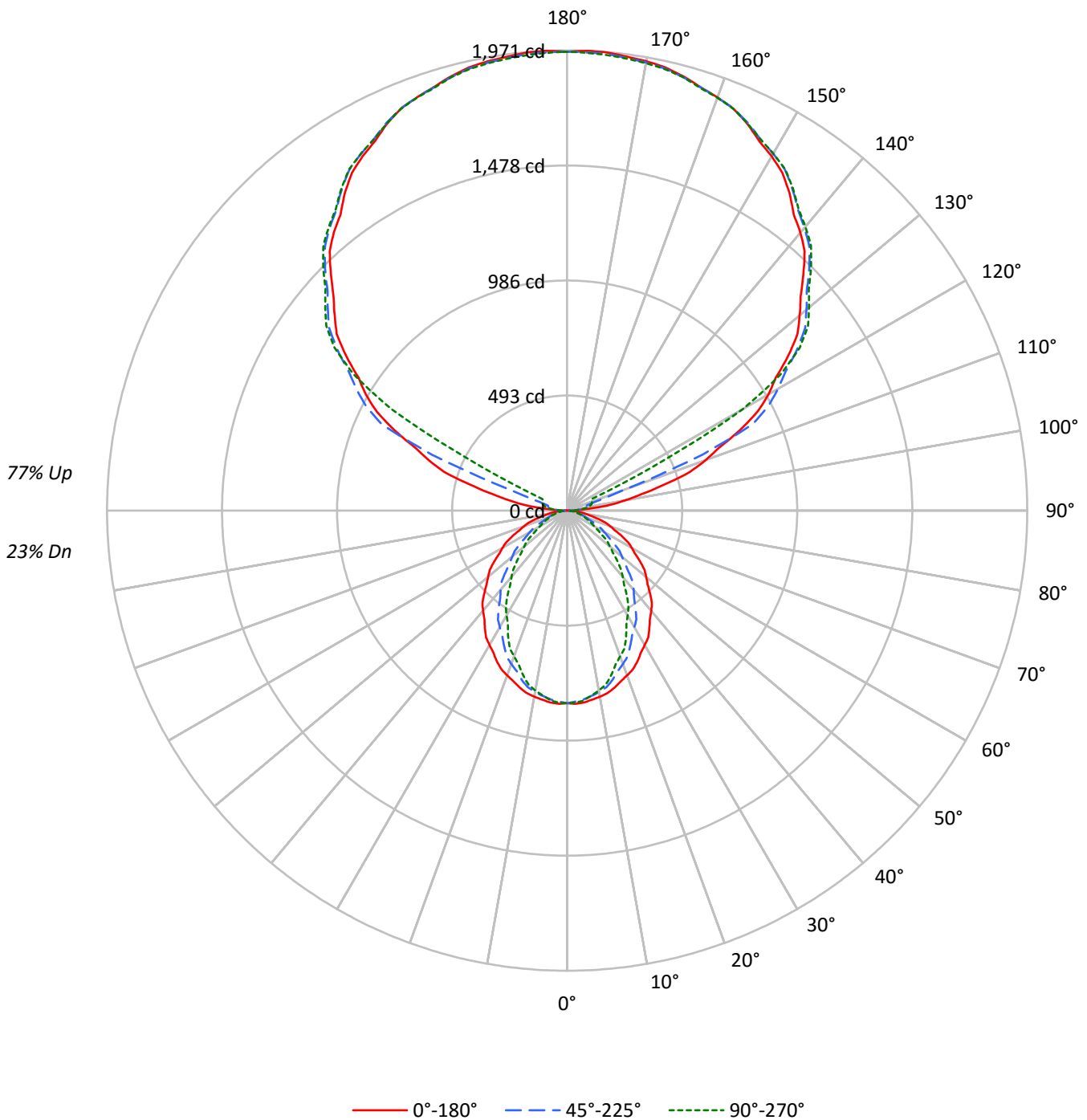
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	89	89	89	89	68	68	68	49	49	49	31	31	31	23
1	92	88	84	81	81	78	75	72	60	58	56	43	42	41	28	27	27	20
2	84	77	71	66	74	68	64	60	53	50	47	38	36	34	25	24	23	17
3	77	68	61	55	68	60	55	50	47	43	39	34	31	29	22	21	20	14
4	70	60	53	47	62	54	47	42	41	37	34	30	27	25	20	18	17	13
5	64	53	46	40	57	48	41	36	37	33	29	27	24	22	18	16	15	11
6	59	48	40	35	52	43	36	31	33	29	25	25	22	19	16	15	13	10
7	55	43	35	30	48	39	32	28	30	26	22	22	19	17	15	13	12	9
8	50	39	32	27	45	35	29	24	27	23	20	20	17	15	14	12	11	8
9	47	35	28	24	42	32	26	22	25	21	17	19	16	13	13	11	10	7
10	44	32	26	21	39	29	23	19	23	19	16	17	14	12	12	10	9	7

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	1.0
10°-20°	212.1	2.8
20°-30°	297.8	4.0
30°-40°	324.8	4.4
40°-50°	298.6	4.0
50°-60°	234.5	3.1
60°-70°	152.9	2.0
70°-80°	78.8	1.1
80°-90°	25.3	0.3
90°-100°	65.6	0.9
100°-110°	240.4	3.2
110°-120°	642.7	8.6
120°-130°	1060.9	14.2
130°-140°	1128.3	15.1
140°-150°	1048.7	14.1
150°-160°	843.1	11.3
160°-170°	543.3	7.3
170°-180°	187.0	2.5
0°-30°	587.2	7.9
0°-40°	912.0	12.2
0°-60°	1445.1	19.4
0°-90°	1702.2	22.8
90°-120°	948.7	12.7
90°-150°	4186.6	56.1
90°-180°	5760.0	77.2
0°-180°	7462.2	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	17	28	35	38	6
95°	92	49	56	62	61	113
105°	432	451	87	102	108	462
115°	818	843	878	250	117	805
125°	1156	1175	1202	1211	1216	1031
135°	1431	1453	1466	1480	1478	1105
145°	1660	1660	1682	1692	1685	1038
155°	1828	1816	1832	1839	1829	842
165°	1926	1918	1921	1930	1921	544
175°	1970	1961	1963	1971	1958	187
180°	1966	1966	1966	1966	1966	



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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	9.5	9.1	8.7	8.4	8.4	9.0	9.5	10.0	10.5	10.7
90°	1.4	4.9	8.4	11.9	15.3	18.3	20.9	23.4	25.9	28.4	30.0
92.5°	28.7	28.4	28.1	27.8	27.5	27.9	29.2	30.5	31.7	33.0	33.8
95°	92.4	82.0	71.6	61.2	50.7	46.6	48.8	51.0	53.3	55.5	57.0
97.5°	183.5	154.1	124.7	95.3	65.9	53.8	58.9	64.0	69.1	74.2	75.5
100°	251.7	208.4	165.1	121.8	78.5	59.6	64.9	70.3	75.7	81.1	83.6
102.5°	326.8	317.7	308.5	299.3	290.2	263.1	218.2	173.2	128.3	83.3	86.6
105°	432.4	441.8	451.3	460.8	470.3	431.9	345.6	259.3	173.0	86.8	90.2
107.5°	552.7	560.3	568.0	575.6	583.3	535.4	431.9	328.4	224.9	121.5	117.9
110°	630.1	636.7	643.3	650.0	656.6	614.2	522.9	431.6	340.2	248.9	217.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	702.9	708.7	714.6	720.5	726.4	718.0	695.5	672.9	650.3	627.8	512.5
115°	817.8	823.2	828.5	833.9	839.3	845.9	853.8	861.7	869.6	877.5	731.2
117.5°	920.5	926.5	932.5	938.5	944.5	950.2	955.6	961.1	966.5	972.0	936.6
120°	995.6	1000.3	1005.0	1009.8	1014.5	1019.7	1025.4	1031.1	1036.8	1042.5	1046.3
122.5°	1059.3	1064.3	1069.3	1074.3	1079.3	1084.9	1091.0	1097.2	1103.4	1109.6	1111.9
125°	1156.3	1160.4	1164.5	1168.6	1172.7	1177.8	1183.8	1189.8	1195.8	1201.8	1204.0
127.5°	1244.2	1248.7	1253.3	1257.8	1262.4	1266.9	1271.4	1275.9	1280.4	1284.9	1288.1
130°	1299.9	1305.0	1310.0	1315.1	1320.2	1324.4	1327.9	1331.4	1334.8	1338.3	1341.8
132.5°	1356.8	1361.1	1365.4	1369.7	1374.0	1377.9	1381.4	1384.8	1388.3	1391.8	1394.8
135°	1430.8	1435.8	1440.9	1445.9	1451.0	1454.9	1457.8	1460.6	1463.5	1466.3	1469.5
137.5°	1505.6	1509.1	1512.7	1516.2	1519.7	1523.1	1526.3	1529.6	1532.8	1536.0	1539.1
140°	1554.5	1557.0	1559.6	1562.1	1564.6	1567.6	1571.1	1574.6	1578.1	1581.5	1584.4
142.5°	1595.5	1597.7	1600.0	1602.3	1604.6	1607.7	1611.7	1615.7	1619.6	1623.6	1626.2
145°	1659.8	1659.4	1659.1	1658.8	1658.5	1661.0	1666.4	1671.8	1677.1	1682.5	1684.7
147.5°	1715.8	1714.6	1713.4	1712.2	1711.0	1713.0	1718.3	1723.7	1729.0	1734.3	1735.9
150°	1752.2	1750.0	1747.8	1745.6	1743.3	1744.8	1749.8	1754.9	1759.9	1765.0	1766.9
152.5°	1782.9	1780.5	1778.0	1775.5	1773.1	1774.2	1779.0	1783.8	1788.6	1793.4	1795.3
155°	1827.6	1824.7	1821.9	1819.0	1816.2	1816.7	1820.5	1824.3	1828.1	1831.8	1833.7
157.5°	1862.6	1860.2	1857.8	1855.4	1853.0	1853.1	1855.7	1858.4	1861.0	1863.7	1865.9
160°	1883.0	1881.1	1879.3	1877.4	1875.5	1875.5	1877.4	1879.3	1881.1	1883.0	1884.9
162.5°	1901.2	1899.4	1897.5	1895.6	1893.7	1893.5	1895.2	1896.8	1898.5	1900.1	1902.3
165°	1925.7	1923.8	1921.9	1920.0	1918.1	1917.7	1918.6	1919.5	1920.5	1921.4	1923.7
167.5°	1943.9	1942.0	1940.1	1938.2	1936.3	1935.8	1936.7	1937.6	1938.5	1939.4	1941.6
170°	1954.2	1952.3	1950.4	1948.5	1946.6	1945.9	1946.6	1947.2	1947.8	1948.5	1950.7
172.5°	1961.0	1959.1	1957.2	1955.3	1953.4	1952.8	1953.4	1954.0	1954.7	1955.3	1957.5
175°	1969.8	1967.6	1965.4	1963.2	1961.0	1960.2	1960.8	1961.4	1962.1	1962.7	1964.9
177.5°	1971.2	1969.5	1967.7	1965.9	1964.1	1963.4	1963.6	1963.9	1964.1	1964.4	1966.2
180°	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5



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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°	10.8	11.0	11.2	11.4	11.5	11.6	11.7	11.9
90°	31.6	33.2	34.8	35.9	36.5	37.1	37.8	38.4
92.5°	34.6	35.5	36.3	36.9	37.3	37.6	38.0	38.4
95°	58.6	60.2	61.8	62.4	62.1	61.8	61.5	61.2
97.5°	76.8	78.0	79.3	80.1	80.5	80.9	81.3	81.6
100°	86.1	88.7	91.2	92.8	93.4	94.0	94.7	95.3
102.5°	89.9	93.2	96.5	98.6	99.5	100.3	101.2	102.1
105°	93.7	97.2	100.7	103.0	104.3	105.6	106.8	108.1
107.5°	114.4	110.8	107.3	106.2	107.4	108.7	110.0	111.2
110°	185.7	154.1	122.5	107.3	108.6	109.8	111.1	112.4



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CATALOG NUMBER: S122RDIW-S485D1440U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	397.2	281.9	166.6	109.4	110.5	111.5	112.5	113.5
115°	584.9	438.5	292.2	207.6	184.9	162.1	139.4	116.6
117.5°	901.2	865.8	830.4	775.3	700.5	625.7	550.9	476.2
120°	1050.1	1053.9	1057.7	1038.2	995.6	952.9	910.2	867.6
122.5°	1114.2	1116.5	1118.7	1115.7	1107.4	1099.2	1090.9	1082.6
125°	1206.2	1208.4	1210.6	1212.2	1213.2	1214.1	1215.1	1216.0
127.5°	1291.3	1294.5	1297.7	1299.5	1299.6	1299.8	1300.0	1300.2
130°	1345.3	1348.8	1352.2	1353.8	1353.5	1353.2	1352.9	1352.5
132.5°	1397.7	1400.7	1403.7	1405.0	1404.7	1404.4	1404.1	1403.7
135°	1472.6	1475.8	1479.0	1480.2	1479.6	1479.0	1478.3	1477.7
137.5°	1542.2	1545.3	1548.4	1549.4	1548.3	1547.3	1546.2	1545.1
140°	1587.2	1590.1	1592.9	1593.5	1592.0	1590.4	1588.8	1587.2
142.5°	1628.8	1631.4	1634.0	1634.5	1632.9	1631.3	1629.8	1628.2
145°	1686.9	1689.1	1691.4	1691.7	1690.1	1688.5	1686.9	1685.4
147.5°	1737.6	1739.2	1740.9	1741.0	1739.7	1738.4	1737.0	1735.7
150°	1768.8	1770.7	1772.6	1772.7	1771.2	1769.6	1768.0	1766.4
152.5°	1797.2	1799.1	1801.0	1800.9	1798.8	1796.8	1794.7	1792.6
155°	1835.6	1837.5	1839.4	1839.1	1836.6	1834.1	1831.5	1829.0
157.5°	1868.0	1870.1	1872.3	1872.1	1869.7	1867.2	1864.7	1862.3
160°	1886.8	1888.7	1890.6	1890.5	1888.3	1886.0	1883.8	1881.6
162.5°	1904.4	1906.6	1908.7	1908.4	1905.7	1903.0	1900.3	1897.6
165°	1925.9	1928.1	1930.3	1930.3	1928.1	1925.9	1923.7	1921.4
167.5°	1943.8	1946.0	1948.2	1947.9	1945.1	1942.2	1939.4	1936.5
170°	1952.9	1955.1	1957.3	1957.0	1954.2	1951.3	1948.5	1945.6
172.5°	1959.7	1961.9	1964.1	1963.8	1961.0	1958.1	1955.3	1952.4
175°	1967.1	1969.3	1971.5	1971.1	1967.9	1964.7	1961.6	1958.4
177.5°	1967.9	1969.7	1971.5	1971.2	1968.9	1966.7	1964.4	1962.1
180°	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5

(END OF REPORT)