

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: P332796-940

Luminaire Tested: **S124DIW-S795D1340U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332796-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D1340U940-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7040.4 lumens
Efficiency: N/A
Efficacy: 114.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

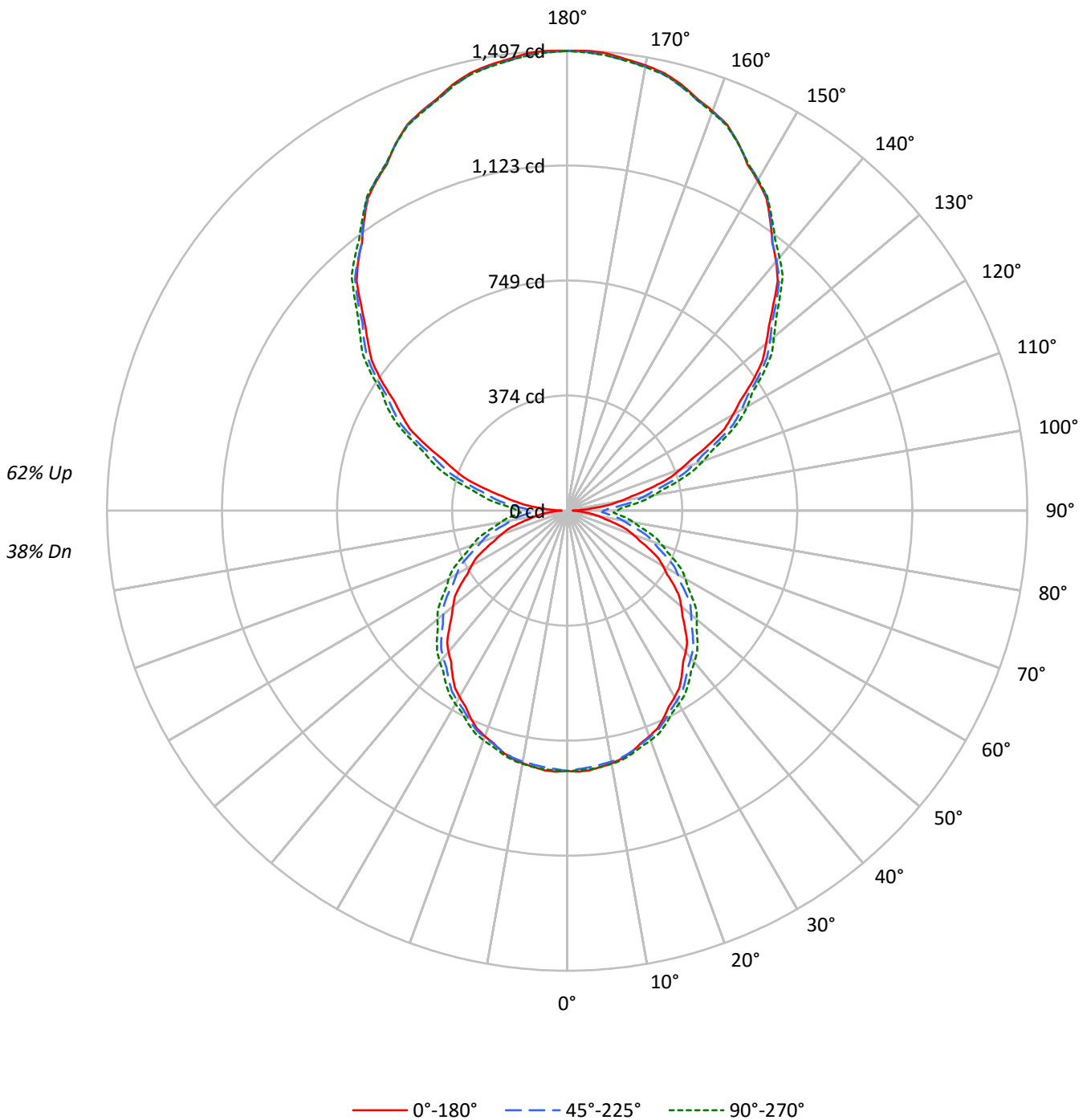
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	94	90	86	82	85	81	78	75	66	63	61	52	50	48	39	37	36	30
2	86	78	72	66	77	71	65	61	57	53	50	45	42	40	33	32	30	25
3	78	68	61	55	70	62	55	50	50	46	42	39	36	33	29	27	25	21
4	71	60	52	46	64	55	48	42	44	39	35	35	31	28	26	24	21	17
5	65	53	45	39	59	49	41	36	40	34	30	31	27	24	23	21	19	15
6	60	48	39	34	54	43	36	31	35	30	26	28	24	21	21	18	16	13
7	55	43	35	29	50	39	32	27	32	27	23	25	21	19	19	16	14	12
8	51	39	31	26	46	35	29	24	29	24	20	23	19	16	18	15	13	10
9	47	35	28	23	43	32	26	21	27	21	18	21	17	15	16	13	11	9
10	44	32	25	20	40	30	23	19	24	19	16	20	16	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6838	6838	6838
5°	6859	6683	6702
10°	6817	6573	6568
15°	6756	6446	6411
20°	6664	6307	6259
25°	6560	6151	6092
30°	6448	5995	5919
35°	6321	5835	5768
40°	6219	5684	5610
45°	6067	5543	5475
50°	5939	5383	5333
55°	5808	5231	5164
60°	5601	5036	5013
65°	5376	4829	4824
70°	5101	4592	4605
75°	4723	4331	4407
80°	4295	4081	4213
85°	3763	3857	4101



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.2	1.1
10°-20°	229.8	3.3
20°-30°	347.5	4.9
30°-40°	420.4	6.0
40°-50°	444.5	6.3
50°-60°	418.3	5.9
60°-70°	347.1	4.9
70°-80°	243.8	3.5
80°-90°	142.3	2.0
90°-100°	180.5	2.6
100°-110°	352.7	5.0
110°-120°	536.5	7.6
120°-130°	676.8	9.6
130°-140°	744.2	10.6
140°-150°	723.6	10.3
150°-160°	606.9	8.6
160°-170°	403.8	5.7
170°-180°	141.4	2.0
0°-30°	657.5	9.3
0°-40°	1077.9	15.3
0°-60°	1940.7	27.6
0°-90°	2673.9	38.0
90°-120°	1069.7	15.2
90°-150°	3214.4	45.7
90°-180°	4366.0	62.0
0°-180°	7040.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	847	847	847	847	847	
5°	848	845	838	846	845	80
15°	813	814	811	819	818	229
25°	744	749	752	762	764	342
35°	651	662	672	684	688	407
45°	542	561	578	594	599	419
55°	425	445	473	492	498	378
65°	294	324	357	379	388	291
75°	163	198	238	264	273	174
85°	50	90	133	160	171	54
90°	19	69	119	152	164	14
95°	82	124	170	198	208	87
105°	278	299	338	364	376	296
115°	510	520	546	565	572	503
125°	738	738	760	775	779	658
135°	949	956	963	975	978	734
145°	1152	1155	1156	1161	1161	721
155°	1318	1318	1317	1321	1317	606
165°	1435	1432	1429	1436	1432	404
175°	1493	1487	1486	1493	1486	142
180°	1495	1495	1495	1495	1495	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0
2.5°	850.1	849.5	849.0	848.6	848.0	847.1	845.7	844.4	843.0	841.7	842.8
5°	847.9	847.3	846.7	846.1	845.4	844.4	842.8	841.4	839.9	838.5	840.2
7.5°	840.7	840.3	840.0	839.6	839.2	838.4	837.2	836.0	834.7	833.6	835.4
10°	834.6	834.5	834.3	834.0	833.8	833.2	832.1	831.1	830.0	828.9	830.9
12.5°	826.3	826.3	826.3	826.2	826.2	825.8	825.1	824.3	823.6	822.9	824.7
15°	812.9	813.1	813.2	813.5	813.7	813.5	812.9	812.3	811.5	810.9	812.9
17.5°	794.4	795.0	795.7	796.4	797.0	797.2	797.1	797.0	796.8	796.7	798.7
20°	781.6	782.2	782.8	783.5	784.1	784.5	784.7	784.9	785.2	785.3	787.5
22.5°	767.1	767.9	768.7	769.5	770.3	771.0	771.3	771.7	772.0	772.5	774.5
25°	743.6	744.8	746.2	747.4	748.7	749.7	750.3	750.9	751.5	752.2	754.5
27.5°	717.5	719.3	721.1	723.0	724.9	726.3	727.3	728.2	729.2	730.1	732.3
30°	700.0	701.7	703.4	705.1	706.8	708.3	709.8	711.2	712.7	714.2	716.5
32.5°	681.0	683.1	685.1	687.1	689.1	690.9	692.6	694.2	695.9	697.5	700.2
35°	650.7	653.2	655.8	658.3	660.8	663.1	665.2	667.4	669.4	671.5	674.5
37.5°	620.1	623.0	626.0	628.8	631.8	634.5	637.1	639.7	642.4	645.0	648.0
40°	600.4	603.2	605.8	608.6	611.4	614.2	617.2	620.1	623.0	626.0	629.2
42.5°	577.7	580.7	583.8	586.8	590.0	593.2	596.6	600.1	603.6	607.0	610.6
45°	542.5	546.5	550.5	554.6	558.6	562.6	566.6	570.6	574.5	578.5	582.2
47.5°	509.0	513.1	517.2	521.4	525.5	529.9	534.5	539.1	543.8	548.4	552.1
50°	484.6	489.3	493.9	498.6	503.2	507.8	512.5	517.1	521.7	526.4	530.7
52.5°	460.4	465.0	469.7	474.3	478.9	483.9	489.2	494.5	499.9	505.2	509.3
55°	424.9	429.4	433.8	438.2	442.6	448.0	454.3	460.7	467.0	473.3	477.5
57.5°	385.3	390.7	396.3	401.7	407.2	413.0	419.4	425.6	431.9	438.2	443.2
60°	359.4	365.0	370.4	375.9	381.4	387.6	394.6	401.5	408.5	415.4	420.3
62.5°	334.4	340.5	346.4	352.4	358.4	364.9	371.8	378.8	385.8	392.7	397.5
65°	294.0	300.8	307.6	314.2	321.0	328.0	335.1	342.3	349.5	356.6	361.9
67.5°	255.1	262.3	269.5	276.6	283.8	291.2	298.9	306.6	314.2	321.9	327.3
70°	228.5	235.8	242.9	250.1	257.3	264.8	272.9	280.9	288.8	296.9	302.6
72.5°	202.8	210.1	217.5	224.8	232.1	240.0	248.6	257.1	265.6	274.1	279.6
75°	163.2	170.9	178.7	186.5	194.3	202.7	211.5	220.3	229.3	238.1	244.0
77.5°	126.2	134.4	142.7	151.0	159.2	168.0	177.3	186.5	195.8	205.1	211.1
80°	103.3	111.8	120.2	128.7	137.1	146.0	155.2	164.5	173.8	183.1	189.4
82.5°	80.6	89.3	98.2	106.9	115.7	124.8	134.0	143.3	152.6	161.8	168.3
85°	50.3	59.1	67.9	76.9	85.7	94.9	104.3	113.8	123.3	132.8	139.1
87.5°	28.8	37.9	47.1	56.3	65.5	74.8	84.4	94.1	103.8	113.4	119.8
90°	18.6	29.9	41.2	52.4	63.7	74.9	86.0	97.1	108.3	119.3	127.0
92.5°	39.1	50.0	60.8	71.6	82.5	93.1	103.6	114.1	124.7	135.2	142.0
95°	81.7	91.0	100.2	109.5	118.8	128.7	139.1	149.5	160.0	170.4	176.8
97.5°	132.4	140.3	148.0	155.9	163.7	173.0	183.7	194.3	205.0	215.6	222.1
100°	172.4	178.9	185.4	191.9	198.4	206.9	217.4	227.9	238.4	249.1	255.2
102.5°	214.9	220.1	225.3	230.5	235.8	243.4	253.6	263.8	273.9	284.1	290.3
105°	277.9	282.5	287.0	291.4	295.9	302.6	311.4	320.2	329.0	337.9	343.8
107.5°	346.1	349.8	353.6	357.3	361.1	366.8	374.3	381.8	389.3	396.9	402.8
110°	391.6	395.0	398.4	401.9	405.4	410.7	417.8	424.9	432.0	439.2	443.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	438.9	441.6	444.3	447.0	449.8	454.4	460.9	467.5	474.1	480.7	485.3
115°	509.9	511.8	513.7	515.6	517.5	521.6	527.8	534.0	540.3	546.4	550.9
117.5°	577.7	579.1	580.4	581.8	583.1	586.7	592.6	598.5	604.5	610.4	613.9
120°	622.3	623.9	625.6	627.2	628.9	632.4	637.8	643.1	648.5	653.8	656.7
122.5°	669.5	670.0	670.6	671.1	671.6	674.6	680.0	685.5	690.8	696.2	699.6
125°	738.2	737.9	737.7	737.5	737.3	739.7	744.7	749.8	754.7	759.7	763.2
127.5°	801.1	801.6	802.2	802.8	803.3	805.4	809.0	812.7	816.4	819.9	823.2
130°	844.7	845.3	845.9	846.4	846.9	848.9	852.3	855.7	859.1	862.5	865.7
132.5°	890.1	890.5	890.8	891.2	891.5	892.9	895.4	897.9	900.4	902.9	906.0
135°	949.0	950.6	952.1	953.7	955.2	956.7	958.1	959.7	961.1	962.6	965.5
137.5°	1014.2	1014.8	1015.3	1015.7	1016.3	1017.1	1018.2	1019.3	1020.5	1021.6	1024.0
140°	1057.7	1058.0	1058.4	1058.6	1058.9	1059.2	1059.4	1059.6	1059.8	1060.1	1062.6
142.5°	1096.7	1097.3	1097.7	1098.1	1098.7	1098.7	1098.4	1098.1	1097.7	1097.3	1099.7
145°	1151.6	1152.4	1153.2	1154.1	1154.9	1155.4	1155.7	1155.9	1156.2	1156.5	1157.4
147.5°	1206.2	1207.2	1208.3	1209.2	1210.3	1210.7	1210.5	1210.3	1210.1	1209.9	1209.9
150°	1239.5	1240.3	1241.2	1242.0	1242.8	1243.1	1243.1	1243.1	1243.1	1243.1	1243.1
152.5°	1270.2	1270.8	1271.3	1271.9	1272.5	1272.9	1273.1	1273.3	1273.5	1273.7	1274.3
155°	1318.3	1318.3	1318.3	1318.3	1318.3	1318.2	1317.9	1317.7	1317.4	1317.2	1318.2
157.5°	1359.1	1358.6	1358.2	1357.6	1357.2	1356.9	1356.9	1356.8	1356.8	1356.7	1357.5
160°	1383.1	1382.9	1382.6	1382.3	1382.1	1381.8	1381.5	1381.3	1381.1	1380.8	1381.5
162.5°	1405.3	1404.6	1404.0	1403.3	1402.7	1402.2	1401.9	1401.7	1401.4	1401.1	1402.6
165°	1435.1	1434.4	1433.6	1432.8	1432.1	1431.5	1430.9	1430.4	1429.9	1429.3	1430.9
167.5°	1458.0	1457.0	1455.9	1454.8	1453.8	1453.2	1453.3	1453.3	1453.4	1453.4	1455.0
170°	1471.0	1469.7	1468.5	1467.1	1465.9	1465.3	1465.6	1465.9	1466.2	1466.3	1467.9
172.5°	1480.2	1479.2	1478.1	1477.0	1476.0	1475.4	1475.5	1475.5	1475.6	1475.6	1477.4
175°	1493.0	1491.7	1490.4	1489.2	1487.8	1487.0	1486.8	1486.6	1486.3	1486.0	1487.8
177.5°	1497.1	1496.1	1495.0	1494.1	1493.0	1492.5	1492.5	1492.5	1492.5	1492.5	1494.0
180°	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0
2.5°	844.0	845.3	846.4	846.9	846.8	846.6	846.4	846.2
5°	841.9	843.6	845.2	846.0	845.7	845.5	845.3	845.1
7.5°	837.3	839.2	841.2	842.0	841.8	841.5	841.3	841.2
10°	832.8	834.6	836.6	837.4	837.2	837.0	836.8	836.6
12.5°	826.3	828.1	829.8	830.6	830.6	830.5	830.5	830.5
15°	814.8	816.6	818.5	819.4	819.2	818.9	818.8	818.5
17.5°	800.6	802.5	804.5	805.4	805.2	805.0	804.9	804.7
20°	789.5	791.7	793.8	794.9	794.9	794.9	794.9	794.9
22.5°	776.7	778.7	780.9	782.1	782.5	782.7	783.1	783.5
25°	756.8	759.1	761.4	762.7	762.9	763.1	763.3	763.6
27.5°	734.4	736.6	738.8	739.9	740.2	740.5	740.7	740.9
30°	718.8	721.1	723.4	724.9	725.3	725.7	726.1	726.6
32.5°	702.8	705.5	708.1	709.7	710.1	710.5	711.0	711.4
35°	677.4	680.4	683.3	685.1	685.7	686.3	687.1	687.7
37.5°	650.9	654.0	656.9	658.8	659.4	660.1	660.8	661.5
40°	632.3	635.5	638.6	640.6	641.5	642.3	643.2	644.0
42.5°	614.0	617.5	621.0	623.1	623.8	624.5	625.2	625.8
45°	585.8	589.3	592.9	595.2	596.3	597.4	598.4	599.4
47.5°	555.8	559.5	563.3	565.7	567.0	568.3	569.5	570.8
50°	534.8	539.0	543.2	546.0	547.2	548.6	549.8	551.1
52.5°	513.6	517.8	522.0	524.8	526.0	527.3	528.5	529.9
55°	481.7	486.0	490.2	492.9	494.2	495.4	496.7	497.9
57.5°	448.3	453.3	458.3	461.4	462.5	463.7	464.9	466.1
60°	425.2	430.0	434.8	438.1	439.8	441.5	443.2	444.9
62.5°	402.3	407.2	412.1	415.4	417.1	418.7	420.4	422.0
65°	367.2	372.5	377.7	381.2	382.9	384.6	386.2	387.9
67.5°	332.6	338.0	343.3	346.8	348.5	350.1	351.8	353.4
70°	308.3	314.0	319.7	323.2	324.7	326.2	327.6	329.1
72.5°	285.2	290.7	296.2	299.8	301.4	303.1	304.7	306.4
75°	249.9	255.7	261.7	265.6	267.5	269.4	271.3	273.1
77.5°	217.0	223.0	229.0	233.0	235.1	237.0	239.1	241.1
80°	195.7	202.1	208.4	212.3	214.0	215.7	217.4	219.1
82.5°	174.8	181.3	187.8	192.0	193.8	195.6	197.5	199.4
85°	145.4	151.8	158.1	162.3	164.4	166.5	168.6	170.8
87.5°	126.3	132.7	139.1	143.3	145.3	147.2	149.2	151.1
90°	134.6	142.3	150.0	154.9	157.1	159.3	161.5	163.7
92.5°	148.9	155.8	162.6	167.0	169.1	171.0	173.0	175.0
95°	183.3	189.8	196.3	200.5	202.3	204.2	206.2	208.0
97.5°	228.5	235.0	241.5	245.6	247.4	249.1	251.0	252.8
100°	261.4	267.6	273.8	277.7	279.2	280.6	282.1	283.6
102.5°	296.6	302.8	309.1	313.1	315.0	316.8	318.6	320.5
105°	349.9	356.0	362.0	366.2	368.7	371.1	373.6	376.0
107.5°	408.7	414.6	420.4	424.2	425.6	427.1	428.6	430.1
110°	447.8	452.2	456.5	459.9	462.4	464.8	467.3	469.8



TEST NUMBER: P332796-940

CATALOG NUMBER: S124DIW-S795D1340U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	489.8	494.5	499.0	502.2	504.1	505.9	507.7	509.6
115°	555.3	559.6	564.0	566.8	568.0	569.3	570.4	571.7
117.5°	617.4	620.9	624.5	626.8	627.9	629.1	630.3	631.5
120°	659.7	662.5	665.5	668.1	670.3	672.4	674.7	676.9
122.5°	702.9	706.3	709.6	711.6	712.2	712.7	713.4	714.0
125°	766.7	770.3	773.7	775.8	776.6	777.3	778.1	778.8
127.5°	826.5	829.8	833.1	835.3	836.2	837.3	838.3	839.4
130°	869.0	872.3	875.6	877.4	877.5	877.8	878.0	878.2
132.5°	909.1	912.2	915.3	917.3	918.2	919.0	919.9	920.7
135°	968.3	971.2	974.0	975.7	976.2	976.7	977.2	977.7
137.5°	1026.4	1028.9	1031.3	1033.0	1034.3	1035.5	1036.7	1037.9
140°	1065.0	1067.5	1070.0	1071.7	1072.4	1073.2	1074.0	1074.8
142.5°	1102.1	1104.5	1106.8	1108.4	1109.2	1110.1	1110.9	1111.7
145°	1158.4	1159.5	1160.5	1161.0	1161.1	1161.2	1161.3	1161.3
147.5°	1209.8	1209.8	1209.7	1209.9	1210.3	1210.8	1211.2	1211.6
150°	1243.1	1243.1	1243.1	1243.0	1242.8	1242.5	1242.2	1242.1
152.5°	1275.0	1275.6	1276.2	1276.1	1275.5	1274.8	1274.2	1273.5
155°	1319.3	1320.3	1321.3	1321.3	1320.3	1319.3	1318.2	1317.2
157.5°	1358.3	1359.1	1359.9	1359.8	1358.9	1358.0	1357.2	1356.3
160°	1382.3	1383.1	1383.8	1383.6	1382.3	1381.1	1379.7	1378.5
162.5°	1403.9	1405.3	1406.7	1406.8	1405.4	1404.2	1402.9	1401.6
165°	1432.4	1434.0	1435.6	1435.8	1434.8	1433.7	1432.7	1431.6
167.5°	1456.5	1458.0	1459.6	1459.6	1457.9	1456.3	1454.8	1453.2
170°	1469.5	1471.0	1472.6	1472.4	1470.6	1468.8	1467.0	1465.3
172.5°	1479.1	1480.9	1482.6	1482.6	1480.8	1479.0	1477.2	1475.4
175°	1489.6	1491.4	1493.3	1493.3	1491.4	1489.6	1487.8	1486.0
177.5°	1495.4	1496.8	1498.3	1498.2	1496.6	1494.9	1493.3	1491.6
180°	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3	1495.3

(END OF REPORT)