

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: io LED

Report Number: P273360

Luminaire Tested: **0.03-3W-835-10-ID-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273360
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (ITL89171-GONIOPHOTOMETRY)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: 0.03-3W-835-10-ID-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES .75 LINEAR LED LUMINAIRE, 10 DEGREE OPTIC.
HIGH OUTPUT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 589.5 lumens
Efficiency: N/A
Efficacy: 47.2 lumens/watt
Spacing Criteria (0/90/45): 0.37 / 0.89 / 0.57
Luminous Opening: Rectangular (W 2.92' x L: 0.05' x H: 0')
CIE Type: Direct

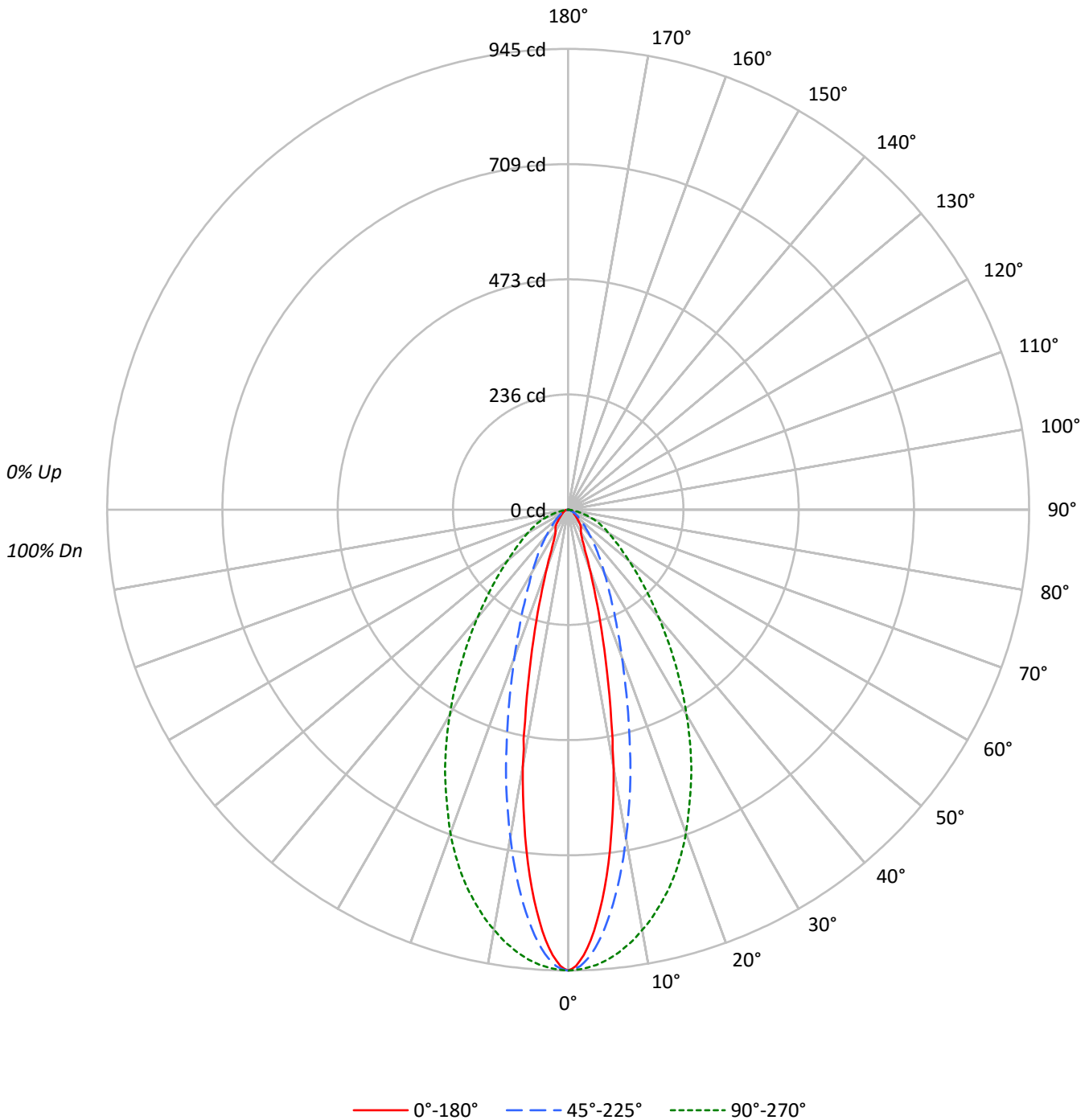
Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	109	106	103	110	107	104	102	103	101	99	99	97	96	95	94	93	91					91			
2	105	100	95	91	103	98	94	90	95	91	88	92	89	86	89	86	84	82					82			
3	99	92	86	81	97	90	85	80	87	83	79	85	81	78	83	79	77	75					75			
4	93	85	78	73	91	83	77	73	81	76	72	79	75	71	77	73	70	69					69			
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63					63			
6	83	73	66	62	82	72	66	61	71	65	61	69	64	61	68	64	60	59					59			
7	79	69	62	57	77	68	62	57	67	61	57	65	60	56	64	60	56	55					55			
8	75	64	58	53	74	64	58	53	63	57	53	62	56	53	61	56	53	51					51			
9	71	61	54	50	70	60	54	50	59	54	50	58	53	50	57	53	49	48					48			
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45					45			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	74400	74400	74400
5°	63438	68030	73214
10°	42771	54586	69944
15°	22406	39580	65320
20°	10649	26894	59134
25°	5968	18512	51878
30°	4682	13309	44110
35°	4392	9842	36532
40°	3741	7174	29733
45°	2951	5322	24183
50°	2437	4128	19867
55°	2169	3308	16979
60°	2063	2598	15037
65°	2180	2049	13692
70°	2210	1588	12016
75°	2099	1369	9187
80°	2040	1088	5939
85°	1536	903	3071



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.8	13.0
10°-20°	141.5	24.0
20°-30°	125.0	21.2
30°-40°	97.7	16.6
40°-50°	67.3	11.4
50°-60°	42.8	7.3
60°-70°	25.2	4.3
70°-80°	11.1	1.9
80°-90°	2.1	0.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	343.3	58.2
0°-40°	441.0	74.8
0°-60°	551.0	93.5
0°-90°	589.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	589.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	945	945	945	945	945	
5°	803	821	861	905	926	68
15°	275	335	486	683	801	77
25°	69	96	213	435	597	34
35°	46	50	102	257	380	28
45°	26	30	48	144	217	21
55°	16	17	24	78	124	14
65°	12	10	11	38	74	11
75°	7	6	4	13	30	7
85°	2	2	1	1	3	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	945.0	945.0	945.0	945.0	945.0	945.0	945.0	945.0	945.0	945.0	945.0
0.5°	941.6	941.3	940.9	940.7	940.3	940.5	941.2	941.9	942.6	943.3	943.4
1°	935.4	935.3	935.2	935.2	935.1	935.6	936.9	938.1	939.3	940.5	941.0
1.5°	925.4	925.8	926.2	926.6	926.9	928.1	930.1	932.1	934.1	936.1	937.0
2°	913.7	914.4	915.1	915.8	916.5	918.2	920.9	923.7	926.4	929.2	931.1
2.5°	899.3	900.7	902.0	903.4	904.8	907.2	910.6	914.1	917.5	920.9	924.0
3°	883.8	885.4	887.1	888.6	890.2	893.3	897.9	902.5	907.1	911.7	915.9
3.5°	865.6	867.7	869.7	871.8	873.9	877.8	883.6	889.4	895.2	901.0	906.1
4°	846.0	848.6	851.0	853.6	856.1	860.9	867.8	874.8	881.7	888.6	895.4
4.5°	824.7	827.9	831.0	834.1	837.2	842.9	851.0	859.2	867.4	875.6	883.9
5°	802.7	806.4	810.1	813.7	817.4	823.8	833.1	842.3	851.6	860.8	870.9
5.5°	779.4	783.6	787.7	791.9	796.1	803.5	813.9	824.4	834.9	845.3	857.2
6°	755.0	759.8	764.6	769.4	774.2	782.5	794.3	806.2	818.1	829.9	843.5
6.5°	729.2	734.7	740.2	745.7	751.2	760.5	773.7	787.0	800.2	813.4	828.6
7°	702.4	708.5	714.6	720.7	726.9	737.2	752.0	766.7	781.5	796.2	813.5
7.5°	675.2	681.9	688.5	695.2	701.8	713.3	729.7	746.0	762.3	778.7	797.6
8°	648.1	655.2	662.3	669.4	676.5	689.0	706.9	724.7	742.6	760.5	781.2
8.5°	620.3	627.9	635.5	643.1	650.8	664.3	683.6	702.9	722.3	741.6	764.2
9°	592.8	600.9	609.1	617.3	625.5	639.8	660.5	681.1	701.7	722.3	746.9
9.5°	564.2	572.2	580.1	588.1	596.0	611.4	634.2	657.1	679.9	702.7	729.1
10°	535.0	543.7	552.3	560.9	569.5	586.0	610.2	634.4	658.6	682.8	711.1
10.5°	498.3	509.2	520.1	531.1	542.0	560.3	586.0	611.7	637.5	663.2	693.4
11°	478.3	487.8	497.1	506.5	515.9	534.2	561.5	588.8	616.0	643.3	675.3
11.5°	443.3	454.7	466.0	477.4	488.8	508.9	537.6	566.4	595.2	624.0	657.6
12°	416.5	428.2	439.9	451.5	463.2	484.1	514.3	544.5	574.6	604.8	639.8
12.5°	390.7	402.6	414.6	426.4	438.3	460.0	491.4	522.8	554.1	585.6	622.2
13°	365.3	377.4	389.4	401.5	413.5	435.9	468.4	500.9	533.5	566.0	604.3
13.5°	340.9	353.1	365.4	377.5	389.7	412.6	446.0	479.5	512.9	546.4	586.2
14°	317.9	330.2	342.5	354.8	367.1	390.2	424.3	458.3	492.4	526.4	568.1
14.5°	296.2	308.4	320.5	332.6	344.8	368.0	402.2	436.3	470.6	504.8	548.3
15°	274.9	287.0	299.0	311.1	323.2	346.6	381.3	416.1	450.8	485.6	530.6
16°	236.8	248.6	260.4	272.3	284.1	307.8	343.2	378.6	414.0	449.5	496.7
17°	202.4	213.9	225.3	236.8	248.2	271.8	307.6	343.3	379.0	414.8	463.8
18°	172.8	183.8	194.7	205.6	216.6	239.6	274.7	309.8	344.9	380.1	430.8
19°	148.4	158.1	167.8	177.5	187.2	209.5	244.5	279.5	314.5	349.5	401.2
20°	127.1	136.6	146.1	155.5	165.0	186.5	220.1	253.7	287.3	321.0	373.4
22.5°	89.3	96.5	103.7	110.9	118.1	137.2	168.2	199.2	230.2	261.2	313.3
25°	68.7	73.6	78.5	83.4	88.2	104.3	131.5	158.7	185.8	213.1	263.3
27.5°	57.7	60.7	63.7	66.7	69.6	82.7	105.8	129.0	152.1	175.3	222.1
30°	51.5	53.2	54.9	56.6	58.3	68.8	88.2	107.6	127.0	146.4	189.1
32.5°	48.5	49.1	49.8	50.5	51.2	59.4	75.1	90.9	106.6	122.3	161.0
35°	45.7	46.0	46.3	46.6	46.9	53.2	65.5	77.8	90.1	102.4	137.3
37.5°	41.9	42.3	42.7	43.1	43.4	48.2	57.2	66.4	75.5	84.5	116.0
40°	36.4	37.1	37.8	38.5	39.2	42.9	49.6	56.3	63.0	69.8	97.8
42.5°	30.9	31.7	32.4	33.2	34.0	36.9	42.1	47.1	52.3	57.4	82.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
45°	26.5	27.0	27.6	28.0	28.6	31.0	35.2	39.4	43.6	47.8	69.6
47.5°	22.7	23.2	23.6	24.1	24.5	26.4	29.8	33.1	36.5	39.9	58.8
50°	19.9	20.3	20.7	21.1	21.4	23.0	25.6	28.3	31.0	33.7	50.1
52.5°	17.9	18.1	18.4	18.6	18.8	20.0	22.1	24.3	26.4	28.5	42.7
55°	15.8	15.9	16.1	16.3	16.4	17.3	19.0	20.7	22.4	24.1	36.2
57.5°	14.4	14.4	14.4	14.4	14.4	15.1	16.3	17.5	18.7	19.9	30.3
60°	13.1	13.0	12.9	12.9	12.8	13.1	14.0	14.8	15.7	16.5	25.2
62.5°	12.4	12.2	11.9	11.7	11.5	11.5	12.0	12.5	12.9	13.4	20.7
65°	11.7	11.4	11.1	10.8	10.4	10.4	10.5	10.7	10.9	11.0	16.8
67.5°	10.7	10.4	10.0	9.8	9.4	9.2	9.1	9.1	9.0	8.9	13.3
70°	9.6	9.3	9.0	8.7	8.4	8.1	7.8	7.5	7.1	6.9	10.3
72.5°	8.6	8.2	7.8	7.4	7.1	6.7	6.4	6.1	5.8	5.5	8.0
75°	6.9	6.7	6.6	6.4	6.3	6.0	5.6	5.2	4.9	4.5	6.1
77.5°	5.5	5.4	5.2	5.0	4.9	4.7	4.3	4.1	3.7	3.4	4.5
80°	4.5	4.3	4.2	4.0	3.8	3.6	3.3	3.0	2.7	2.4	3.0
82.5°	3.1	3.0	3.0	2.9	2.8	2.6	2.4	2.2	1.9	1.7	1.9
85°	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.3	1.2	1.0	1.1
87.5°	1.0	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	945.0	945.0	945.0	945.0	945.0	945.0	945.0	945.0
0.5°	943.6	943.8	943.9	944.0	944.1	944.2	944.2	944.3
1°	941.4	941.9	942.4	942.7	942.9	943.1	943.4	943.6
1.5°	938.1	939.0	940.0	940.8	941.4	941.8	942.4	942.9
2°	933.0	934.9	936.8	938.2	939.0	939.9	940.7	941.6
2.5°	927.1	930.1	933.2	935.2	936.3	937.4	938.4	939.5
3°	920.0	924.2	928.4	931.3	932.8	934.4	935.9	937.4
3.5°	911.2	916.3	921.5	925.3	927.8	930.4	932.8	935.4
4°	902.1	908.8	915.5	920.4	923.5	926.5	929.6	932.6
4.5°	892.2	900.5	908.8	914.8	918.4	922.0	925.6	929.2
5°	880.9	891.0	901.1	908.4	912.9	917.4	921.9	926.4
5.5°	869.2	881.1	893.0	901.6	906.7	911.9	917.1	922.3
6°	857.1	870.6	884.2	894.1	900.1	906.1	912.1	918.2
6.5°	843.9	859.2	874.5	885.7	892.8	899.8	907.0	914.1
7°	830.7	848.0	865.2	877.8	885.7	893.5	901.4	909.3
7.5°	816.5	835.5	854.4	868.3	877.2	886.0	894.9	903.8
8°	802.0	822.8	843.6	858.9	868.9	878.9	888.9	898.9
8.5°	786.9	809.6	832.3	849.2	860.3	871.3	882.4	893.4
9°	771.3	795.9	820.4	838.7	850.8	863.0	875.1	887.3
9.5°	755.6	782.0	808.4	828.2	841.4	854.7	867.9	881.1
10°	739.4	767.8	796.1	817.4	831.8	846.2	860.5	874.9
10.5°	723.6	753.7	783.9	806.7	822.2	837.7	853.2	868.7
11°	707.3	739.3	771.3	795.7	812.4	829.1	845.8	862.5
11.5°	691.1	724.6	758.1	783.9	801.8	819.8	837.7	855.6
12°	674.9	709.9	745.0	772.0	791.0	810.1	829.1	848.1
12.5°	658.9	695.5	732.1	760.5	780.5	800.5	820.5	840.5
13°	642.7	680.9	719.3	749.0	769.9	791.0	811.9	833.0
13.5°	626.1	666.0	705.8	736.8	759.0	781.1	803.3	825.4
14°	609.7	651.3	692.9	725.2	748.2	771.2	794.2	817.2
14.5°	591.9	635.4	678.9	712.8	737.0	761.2	785.4	809.6
15°	575.7	620.7	665.8	700.9	726.0	751.1	776.2	801.4
16°	543.8	591.1	638.3	675.4	702.6	729.8	757.0	784.2
17°	512.8	561.8	610.8	649.9	678.8	707.7	736.7	765.6
18°	481.6	532.4	583.2	623.9	654.5	685.1	715.7	746.4
19°	453.0	504.8	556.5	598.5	630.4	662.5	694.4	726.4
20°	425.9	478.3	530.8	573.6	606.7	639.7	672.8	705.8
22.5°	365.5	417.7	469.8	512.9	547.1	581.2	615.3	649.5
25°	313.5	363.8	414.0	456.8	491.9	527.0	562.1	597.2
27.5°	268.9	315.7	362.5	403.2	437.6	472.0	506.4	540.9
30°	231.7	274.4	317.1	354.8	387.4	420.0	452.6	485.2
32.5°	199.8	238.5	277.2	311.5	341.6	371.6	401.6	431.6
35°	172.2	207.1	242.0	272.8	299.6	326.5	353.3	380.1
37.5°	147.5	178.9	210.4	237.9	261.6	285.3	309.0	332.6
40°	125.8	153.8	181.9	206.2	227.0	247.8	268.6	289.3
42.5°	107.0	131.8	156.6	178.1	196.4	214.5	232.7	250.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
45°	91.3	113.1	134.8	153.7	169.5	185.4	201.3	217.2
47.5°	77.7	96.7	115.6	132.0	145.9	159.9	173.7	187.6
50°	66.5	83.0	99.4	113.6	125.8	137.9	150.0	162.2
52.5°	56.8	70.9	85.0	97.5	108.4	119.2	130.0	140.9
55°	48.3	60.5	72.6	83.7	93.7	103.7	113.7	123.7
57.5°	40.7	51.1	61.4	71.3	80.6	90.0	99.2	108.6
60°	33.9	42.6	51.3	60.1	68.9	77.8	86.7	95.5
62.5°	27.9	35.2	42.4	50.3	58.9	67.4	76.0	84.5
65°	22.6	28.4	34.2	41.2	49.3	57.3	65.4	73.5
67.5°	17.8	22.2	26.7	32.7	40.3	48.0	55.6	63.2
70°	13.7	17.2	20.6	25.6	32.3	39.0	45.6	52.2
72.5°	10.5	13.1	15.6	19.4	24.7	30.0	35.3	40.5
75°	7.8	9.5	11.2	14.0	18.1	22.1	26.2	30.2
77.5°	5.6	6.7	7.7	9.6	12.4	15.1	17.9	20.6
80°	3.5	4.0	4.5	5.7	7.6	9.4	11.2	13.1
82.5°	2.2	2.4	2.6	3.2	4.1	5.0	6.0	6.9
85°	1.2	1.2	1.3	1.6	2.1	2.5	3.0	3.4
87.5°	0.5	0.5	0.4	0.4	0.5	0.5	0.6	0.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)