

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: C2104245A001

Luminaire Tested: **LT3059FS351EWHDMR**

Test Date: 2021-01-26



Test Information

Test Method: LM-41-14
Report Number: C2104245A001
Test Lab: EVERFINE
Test Date: 2021-01-26
Issue Date: 2021-02-19 09:49:23
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: LT3059FS351EWHDMR
Description: LT3059FS351EWHDMR
Light Source: -
Ballast/Driver: -

Summary

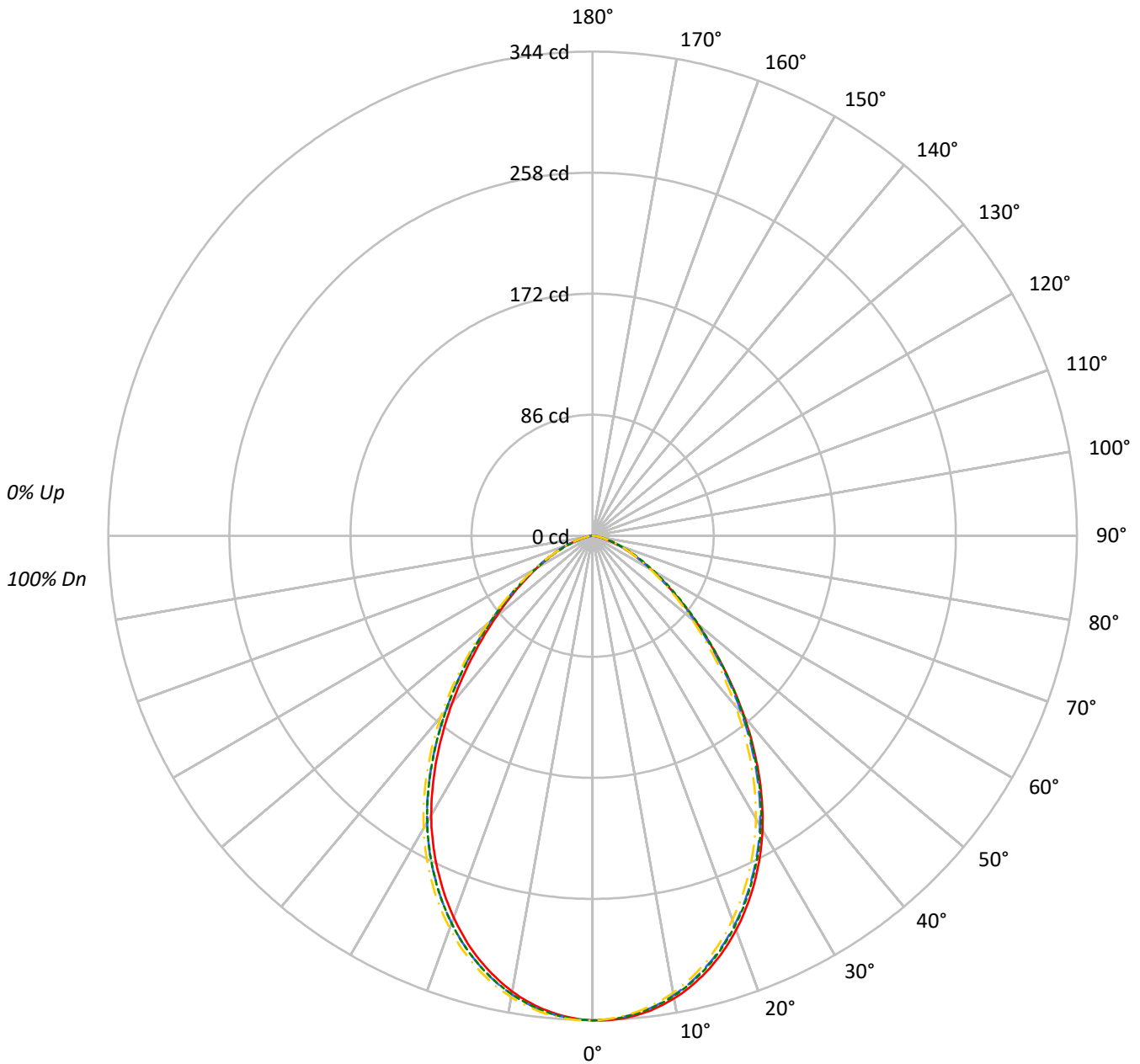
Lumens per Lamp: 573.4 (1 lamp)
Luminaire Lumens: 573.4 lumens
Efficiency: 100.0%
Efficacy: 89.0 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.11
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 6.44
Input Voltage (V): NR
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									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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	111	108	104	101	109	105	102	100	101	99	97	98	96	94	94	92	91	89																			
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	78																			
3	96	87	81	75	94	86	80	75	83	78	74	80	76	72	78	74	71	69																			
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	62																			
5	83	72	65	59	81	71	64	59	69	63	58	67	62	57	66	61	57	55																			
6	77	66	58	53	76	65	58	53	63	57	52	62	56	52	60	55	51	50																			
7	72	61	53	48	71	60	53	47	58	52	47	57	51	47	56	51	47	45																			
8	68	56	48	43	67	55	48	43	54	48	43	53	47	43	52	47	43	41																			
9	64	52	45	40	63	51	44	40	50	44	39	49	43	39	48	43	39	37																			
10	60	48	41	36	59	48	41	36	47	41	36	46	40	36	45	40	36	34																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	75510	75510	75510	75510
5°	75353	75131	74787	74998
10°	74325	73933	73214	73638
15°	72372	71866	70734	71438
20°	69553	68880	67351	68362
25°	65794	65068	63145	64383
30°	61116	60514	58085	59491
35°	55020	54638	51646	53383
40°	47960	47712	44418	46368
45°	40399	40402	37166	39039
50°	33212	33461	30568	32114
55°	26786	27327	24826	25846
60°	21284	22015	19928	20298
65°	16636	17555	15869	15604
70°	12729	13538	12255	11060
75°	8093	9284	7608	7272
80°	5275	6788	5012	5051
85°	1310	4927	970	3093



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	32.2	5.6	5.6
10°-20°	88.5	15.4	15.4
20°-30°	122.5	21.4	21.4
30°-40°	124.9	21.8	21.8
40°-50°	98.0	17.1	17.1
50°-60°	62.0	10.8	10.8
60°-70°	31.9	5.6	5.6
70°-80°	11.5	2.0	2.0
80°-90°	1.9	0.3	0.3
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	243.2	42.4	42.4
0°-40°	368.1	64.2	64.2
0°-60°	528.1	92.1	92.1
0°-90°	573.4	100.0	100.0
90°-120°	0.0	0.0	0.0
90°-150°	0.0	0.0	0.0
90°-180°	0.0	0.0	0.0
0°-180°	573.4	100.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	344	344	344	344	344	
5°	342	341	340	341	342	32
15°	319	317	312	315	319	90
25°	272	269	261	266	272	125
35°	206	204	193	199	206	128
45°	130	130	120	126	130	101
55°	70	71	65	68	70	63
65°	32	34	31	30	32	32
75°	10	11	9	9	10	11
85°	1	2	0	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4
1°	344.4	344.2	343.9	344.2	344.0	344.0	344.0	344.0	344.0	344.1	344.2
2°	344.4	343.8	343.5	343.9	343.4	343.3	343.3	343.4	343.7	343.7	344.1
3°	343.9	343.4	342.8	343.2	342.6	342.5	342.3	342.7	343.1	342.9	343.6
4°	343.3	342.5	341.9	342.4	341.5	341.4	341.2	341.7	342.2	341.9	342.8
5°	342.3	341.5	340.7	341.3	340.2	340.1	339.8	340.4	341.0	340.7	341.9
6°	341.1	340.1	339.2	339.9	338.6	338.4	338.1	338.9	339.6	339.2	340.6
7°	339.7	338.5	337.5	338.4	336.8	336.5	336.1	337.1	338.0	337.4	338.9
8°	338.0	336.7	335.5	336.4	334.7	334.4	333.9	335.1	336.0	335.5	337.1
9°	335.9	334.5	333.3	334.5	332.4	332.0	331.5	332.7	333.8	333.2	335.0
10°	333.8	332.1	330.8	332.0	329.9	329.5	328.8	330.2	331.4	330.7	332.8
11°	331.3	329.6	328.1	329.4	327.0	326.5	325.9	327.5	328.8	328.0	330.3
12°	328.5	326.8	325.2	326.5	323.9	323.4	322.6	324.4	326.0	325.0	327.5
13°	325.4	323.6	322.0	323.4	320.5	320.1	319.1	321.0	322.8	321.9	324.4
14°	322.3	320.3	318.5	320.0	317.0	316.4	315.4	317.4	319.4	318.4	321.2
15°	318.8	316.7	314.8	316.6	313.2	312.6	311.6	313.8	315.7	314.7	317.6
16°	315.1	313.0	311.0	312.7	309.2	308.4	307.4	309.8	312.0	310.8	313.9
17°	311.2	308.9	306.9	308.6	304.9	304.2	303.0	305.6	307.8	306.7	310.0
18°	307.1	304.7	302.6	304.4	300.5	299.5	298.4	301.1	303.5	302.4	305.8
19°	302.7	300.2	298.0	299.9	295.8	294.8	293.6	296.5	299.0	297.7	301.4
20°	298.1	295.5	293.3	295.2	290.9	289.8	288.6	291.6	294.3	293.0	296.7
21°	293.3	290.7	288.4	290.3	285.7	284.7	283.4	286.4	289.4	288.1	291.9
22°	288.2	285.7	283.3	285.3	280.6	279.4	278.1	281.3	284.4	282.8	286.8
23°	283.0	280.4	277.9	279.9	275.1	274.0	272.5	275.9	279.0	277.4	281.7
24°	277.6	275.0	272.5	274.4	269.5	268.2	266.7	270.1	273.5	271.9	276.3
25°	271.9	269.3	266.9	268.9	263.8	262.4	261.0	264.5	267.8	266.1	270.7
26°	266.1	263.5	261.1	263.3	257.9	256.5	254.9	258.7	262.1	260.3	264.8
27°	260.3	257.6	255.2	257.4	251.8	250.4	248.7	252.6	256.1	254.2	259.0
28°	254.1	251.6	249.2	251.5	245.7	244.2	242.5	246.4	249.9	248.0	252.9
29°	247.9	245.4	243.0	245.2	239.4	237.7	236.1	239.9	243.6	241.7	246.7
30°	241.4	238.9	236.7	239.0	232.8	231.2	229.4	233.4	237.1	235.0	240.2
31°	234.5	232.1	230.2	232.6	225.8	224.2	222.3	226.6	230.3	228.2	233.5
32°	227.5	225.1	223.2	225.8	218.9	217.0	215.1	219.5	223.3	221.1	226.6
33°	220.3	217.9	216.2	218.7	211.5	209.7	207.8	212.3	216.2	214.0	219.6
34°	213.0	210.6	208.9	211.5	204.1	202.2	200.3	204.9	208.9	206.7	212.5
35°	205.5	203.2	201.4	204.1	196.6	194.7	192.9	197.6	201.5	199.4	205.2
36°	198.0	195.6	194.1	196.6	189.1	187.3	185.3	190.2	194.0	191.9	197.8
37°	190.5	188.1	186.6	189.2	181.4	179.8	177.7	182.7	186.5	184.5	190.6
38°	182.8	180.4	179.2	181.7	173.7	172.3	170.1	175.2	179.0	177.0	183.1
39°	175.2	172.7	171.7	174.2	166.2	164.7	162.7	167.8	171.5	169.4	175.7
40°	167.5	165.0	164.2	166.7	158.7	157.3	155.2	160.4	164.0	162.0	168.3
41°	159.9	157.4	156.8	159.1	151.3	150.0	147.8	153.0	156.5	154.5	160.8
42°	152.3	149.9	149.4	151.8	144.0	142.6	140.6	145.6	149.2	147.2	153.4



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	130.3	128.2	128.1	130.3	123.1	122.0	119.8	124.7	128.0	125.9	131.7
46°	123.2	121.2	121.3	123.4	116.4	115.4	113.3	117.9	121.1	119.0	124.7
47°	116.5	114.6	114.7	116.8	110.0	109.1	106.9	111.4	114.6	112.4	117.9
48°	109.8	108.0	108.2	110.4	103.8	103.0	100.8	105.2	108.1	105.9	111.3
49°	103.4	101.7	102.0	104.2	97.8	97.0	94.8	99.1	101.8	99.7	104.8
50°	97.4	95.6	96.0	98.1	92.5	91.3	89.6	93.2	95.7	94.1	98.7
51°	91.4	90.1	90.2	92.4	87.2	85.9	84.4	87.6	90.3	88.5	92.6
52°	85.7	84.6	84.6	86.8	81.9	80.6	79.2	82.2	85.0	83.0	86.8
53°	80.3	79.3	79.3	81.4	76.9	75.6	74.2	77.0	79.6	77.6	81.2
54°	75.0	74.2	74.1	76.4	72.1	70.8	69.5	72.1	74.5	72.5	75.8
55°	70.1	69.3	69.2	71.5	67.4	66.2	64.9	67.3	69.6	67.6	70.6
56°	65.3	64.6	64.6	66.8	63.0	61.9	60.7	62.8	64.8	62.9	65.7
57°	60.8	60.1	60.1	62.3	58.8	57.7	56.5	58.5	60.4	58.4	61.0
58°	56.5	55.9	55.8	58.1	54.9	53.8	52.7	54.4	56.1	54.1	56.5
59°	52.4	51.8	51.8	54.1	51.1	50.1	48.9	50.5	52.0	50.1	52.2
60°	48.5	48.0	48.0	50.2	47.4	46.5	45.4	46.8	48.1	46.3	48.2
61°	44.9	44.4	44.4	46.6	44.1	43.2	42.1	43.3	44.5	42.6	44.3
62°	41.4	41.0	40.9	43.1	40.8	40.0	39.0	40.0	41.0	39.2	40.8
63°	38.1	37.7	37.7	39.8	37.8	37.0	36.0	36.9	37.7	36.0	37.4
64°	35.0	34.7	34.7	36.8	34.9	34.2	33.2	34.0	34.7	32.9	34.2
65°	32.1	31.8	31.8	33.8	32.1	31.5	30.6	31.2	31.8	30.1	31.2
66°	29.4	29.1	29.1	31.1	29.6	29.0	28.1	28.6	29.1	27.3	28.4
67°	26.8	26.6	26.6	28.5	27.2	26.6	25.8	26.2	26.6	24.5	25.8
68°	24.4	24.2	24.2	26.0	24.8	24.4	23.5	23.9	24.2	21.8	23.3
69°	22.1	21.9	22.0	23.5	22.6	22.2	21.4	21.7	21.9	19.5	20.9
70°	19.9	19.8	19.8	21.1	20.5	20.1	19.1	19.6	19.8	17.3	18.6
71°	17.6	17.8	17.9	18.8	18.4	18.2	16.9	17.6	17.8	15.1	16.6
72°	15.4	15.9	16.0	16.7	16.5	16.1	14.8	15.6	15.9	13.1	14.8
73°	13.4	13.9	14.3	14.7	14.7	14.2	12.7	13.7	14.1	11.4	13.0
74°	11.4	12.1	12.6	12.7	13.0	12.4	10.7	11.9	12.5	9.9	11.4
75°	9.6	10.4	11.1	11.0	11.3	10.7	9.0	10.2	10.9	8.6	9.9
76°	8.1	8.9	9.6	9.5	9.8	9.2	7.8	8.8	9.5	7.4	8.4
77°	7.1	7.7	8.3	8.2	8.4	7.9	6.8	7.5	8.2	6.4	7.2
78°	6.0	6.6	7.3	7.1	7.2	6.9	5.8	6.5	7.2	5.6	6.3
79°	5.1	5.7	6.4	6.2	6.3	6.0	4.8	5.6	6.4	4.8	5.4
80°	4.2	4.9	5.6	5.4	5.5	5.1	4.0	4.8	5.6	4.0	4.5
81°	3.3	4.0	4.8	4.6	4.6	4.3	3.1	3.9	4.8	3.3	3.8
82°	2.6	3.3	4.1	3.8	3.9	3.5	2.4	3.2	4.1	2.7	3.1
83°	1.8	2.6	3.4	3.1	3.3	2.8	1.6	2.5	3.4	2.1	2.6
84°	1.2	1.9	2.8	2.5	2.6	2.1	1.0	1.8	2.7	1.6	2.0
85°	0.5	1.3	2.1	2.0	2.1	1.5	0.4	1.3	2.1	1.2	1.5
86°	0.2	0.9	1.6	1.5	1.6	1.0	0.2	0.9	1.5	0.8	1.0
87°	0.1	0.6	1.0	1.0	1.1	0.7	0.1	0.5	0.9	0.4	0.6



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
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):

	330°	360°
0°	344.4	344.4
1°	344.4	344.4
2°	344.2	344.4
3°	343.7	343.9
4°	343.0	343.3
5°	342.0	342.3
6°	340.7	341.1
7°	339.1	339.7
8°	337.4	338.0
9°	335.3	335.9
10°	333.0	333.8
11°	330.5	331.3
12°	327.8	328.5
13°	324.6	325.4
14°	321.4	322.3
15°	317.9	318.8
16°	314.2	315.1
17°	310.2	311.2
18°	306.0	307.1
19°	301.5	302.7
20°	296.9	298.1
21°	292.1	293.3
22°	287.0	288.2
23°	281.8	283.0
24°	276.4	277.6
25°	270.7	271.9
26°	264.9	266.1
27°	259.0	260.3
28°	253.0	254.1
29°	246.7	247.9
30°	240.1	241.4
31°	233.3	234.5
32°	226.5	227.5
33°	219.4	220.3
34°	212.2	213.0
35°	204.7	205.5
36°	197.3	198.0
37°	189.8	190.5
38°	182.2	182.8
39°	174.6	175.2
40°	167.0	167.5
41°	159.5	159.9
42°	152.1	152.3



TEST NUMBER: C2104245A001

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CANDELA DISTRIBUTION (continued):

	330°	360°
45°	130.1	130.3
46°	123.0	123.2
47°	116.3	116.5
48°	109.6	109.8
49°	103.1	103.4
50°	96.8	97.4
51°	91.3	91.4
52°	85.7	85.7
53°	80.2	80.3
54°	74.9	75.0
55°	69.8	70.1
56°	64.9	65.3
57°	60.3	60.8
58°	55.9	56.5
59°	51.7	52.4
60°	47.8	48.5
61°	44.1	44.9
62°	40.5	41.4
63°	37.2	38.1
64°	34.1	35.0
65°	31.2	32.1
66°	28.5	29.4
67°	25.9	26.8
68°	23.5	24.4
69°	21.3	22.1
70°	19.2	19.9
71°	17.2	17.6
72°	15.3	15.4
73°	13.4	13.4
74°	11.7	11.4
75°	10.1	9.6
76°	8.7	8.1
77°	7.5	7.1
78°	6.5	6.0
79°	5.6	5.1
80°	4.7	4.2
81°	3.9	3.3
82°	3.2	2.6
83°	2.5	1.8
84°	1.8	1.2
85°	1.3	0.5
86°	0.9	0.2
87°	0.5	0.1



TEST NUMBER: C2104245A001

CATALOG NUMBER: LT3059FS351EWHDMR

CANDELA DISTRIBUTION (continued):

	330°	360°
90°	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°







43°	144.8	142.6	142.2	144.5	136.8	135.6	133.4	138.5	142.0	139.9	146.1
44°	137.4	135.3	135.1	137.3	129.9	128.7	126.5	131.5	134.9	132.8	138.8



88°	0.0	0.3	0.5	0.6	0.6	0.3	0.0	0.2	0.4	0.0	0.1
89°	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0





43°	144.5	144.8
44°	137.3	137.4



88°	0.2	0.0
89°	0.0	0.0



(END OF REPORT)