

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: HALO COMMERCIAL

Report Number: P242046

Luminaire Tested: **PRS430D010-S4M24-41SWWMB**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P242046
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-64)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PRS430D010-S4M24-41SWWMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" WALL WASH DISTRIBUTION, WW TRIM MATTE BLACK
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1244.9 lumens
Efficiency: N/A
Efficacy: 49.8 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.94 / 1.03
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')
CIE Type: Direct

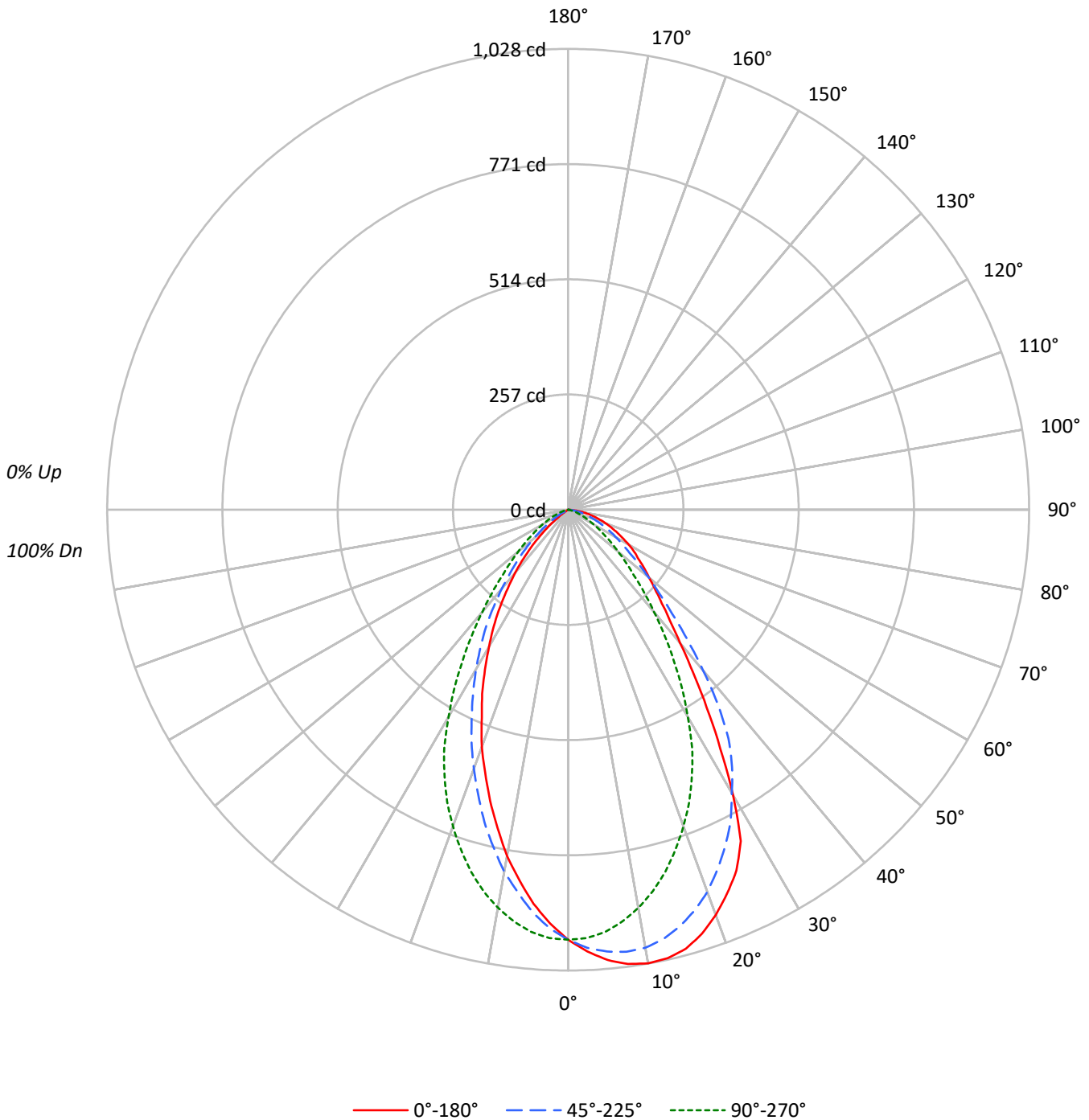
Input Watts (W): 25
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90				
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	88	85	83	81				
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73				
4	91	82	75	70	89	81	75	70	79	73	69	77	72	68	75	71	67	65				
5	86	75	68	63	84	74	68	63	73	67	62	71	66	62	69	65	61	59				
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	59	56	54				
7	76	64	57	52	74	64	57	52	62	56	52	61	56	51	60	55	51	50				
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46				
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42				
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	73428	73428	73428
5°	77481	72656	67823
10°	79869	70099	60959
15°	80345	66271	53275
20°	78360	61222	45860
25°	75014	55167	38318
30°	64980	47100	31156
35°	50309	38302	24772
40°	38779	29766	18295
45°	31955	22483	12124
50°	27984	17243	6180
55°	25529	13131	1455
60°	23851	10042	413
65°	21770	7426	0
70°	20187	4901	0
75°	17774	3224	0
80°	15648	1190	0
85°	9573	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.9	7.1
10°-20°	235.2	18.9
20°-30°	304.0	24.4
30°-40°	270.0	21.7
40°-50°	175.5	14.1
50°-60°	97.5	7.8
60°-70°	49.3	4.0
70°-80°	20.8	1.7
80°-90°	3.7	0.3
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°	628.2	50.5
0°-40°	898.1	72.1
0°-60°	1171.2	94.1
0°-90°	1244.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1244.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	959	959	959	959	959	
5°	1008	989	946	902	883	97
15°	1014	962	836	722	672	284
25°	888	828	653	508	454	402
35°	538	623	410	320	265	339
45°	295	328	208	158	112	232
55°	191	167	98	57	11	173
65°	120	88	41	3	0	120
75°	60	38	11	0	0	64
85°	11	6	0	0	0	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	986.6	983.8	986.6	983.8	983.8	983.8	983.8	981.1	981.1	978.4	978.4
5°	1008.4	1008.4	1005.7	1005.7	1003.0	1003.0	1003.0	1000.2	997.5	994.8	989.3
7.5°	1022.1	1022.1	1019.4	1019.4	1016.6	1013.9	1013.9	1008.4	1005.7	1000.2	994.8
10°	1027.6	1027.6	1024.8	1022.1	1019.4	1016.6	1016.6	1011.2	1005.7	997.5	992.0
12.5°	1024.8	1024.8	1022.1	1019.4	1016.6	1013.9	1011.2	1005.7	997.5	989.3	981.1
15°	1013.9	1013.9	1011.2	1008.4	1003.0	1000.2	997.5	992.0	983.8	972.9	962.0
17.5°	992.0	992.0	989.3	986.6	983.8	981.1	975.7	970.2	959.3	948.3	937.4
20°	962.0	962.0	962.0	959.3	953.8	951.1	948.3	940.1	931.9	921.0	907.3
22.5°	926.5	926.5	923.7	921.0	915.5	915.5	910.1	901.9	893.7	882.7	869.1
25°	888.2	885.5	882.7	882.7	874.5	871.8	869.1	860.9	852.7	841.7	828.1
27.5°	833.5	830.8	833.5	833.5	830.8	828.1	825.3	817.1	803.5	792.5	784.3
30°	735.2	737.9	737.9	743.4	754.3	762.5	767.9	767.9	757.0	746.1	729.7
32.5°	631.3	636.8	639.5	650.4	661.4	669.6	675.0	686.0	699.6	696.9	680.5
35°	538.4	543.8	546.6	554.8	568.4	573.9	582.1	598.5	614.9	628.6	623.1
37.5°	456.4	456.4	464.6	472.8	483.7	491.9	500.1	513.8	535.7	546.6	549.3
40°	388.1	390.8	393.5	404.5	412.7	420.9	426.3	440.0	459.1	467.3	467.3
42.5°	336.1	336.1	338.9	344.3	355.3	358.0	363.5	374.4	385.3	390.8	393.5
45°	295.2	295.2	295.2	300.6	306.1	308.8	314.3	322.5	325.2	327.9	327.9
47.5°	262.4	262.4	262.4	265.1	267.8	270.6	273.3	276.0	278.8	278.8	273.3
50°	235.0	235.0	237.8	237.8	237.8	240.5	240.5	240.5	237.8	235.0	232.3
52.5°	213.2	213.2	213.2	213.2	213.2	213.2	213.2	210.4	205.0	202.2	196.8
55°	191.3	194.0	194.0	194.0	191.3	191.3	188.6	185.8	177.6	172.2	166.7
57.5°	174.9	174.9	174.9	172.2	172.2	169.4	166.7	161.2	155.8	150.3	142.1
60°	155.8	155.8	155.8	153.0	153.0	150.3	147.6	142.1	136.6	128.4	123.0
62.5°	136.6	136.6	136.6	136.6	133.9	131.2	128.4	123.0	117.5	112.0	106.6
65°	120.2	120.2	120.2	120.2	114.8	112.0	109.3	103.9	98.4	92.9	87.5
67.5°	103.9	103.9	103.9	101.1	98.4	95.7	92.9	90.2	84.7	79.3	73.8
70°	90.2	90.2	87.5	84.7	82.0	82.0	79.3	73.8	71.1	65.6	60.1
72.5°	73.8	73.8	73.8	71.1	68.3	65.6	62.9	60.1	57.4	51.9	49.2
75°	60.1	60.1	60.1	57.4	54.7	51.9	51.9	46.5	43.7	41.0	38.3
77.5°	46.5	46.5	46.5	43.7	41.0	41.0	38.3	35.5	32.8	30.1	27.3
80°	35.5	35.5	32.8	32.8	30.1	30.1	27.3	27.3	24.6	21.9	19.1
82.5°	21.9	21.9	21.9	21.9	19.1	19.1	19.1	16.4	16.4	13.7	10.9
85°	10.9	10.9	10.9	10.9	8.2	8.2	8.2	8.2	8.2	5.5	5.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	975.7	972.9	970.2	967.5	967.5	964.7	964.7	962.0	959.3	956.5	953.8
5°	986.6	981.1	975.7	972.9	970.2	967.5	962.0	956.5	951.1	945.6	940.1
7.5°	986.6	981.1	972.9	967.5	962.0	959.3	951.1	942.9	934.7	926.5	918.3
10°	983.8	972.9	964.7	956.5	948.3	942.9	934.7	923.7	912.8	901.9	890.9
12.5°	970.2	959.3	948.3	937.4	929.2	923.7	910.1	896.4	885.5	871.8	858.1
15°	951.1	940.1	926.5	910.1	904.6	896.4	882.7	866.3	852.7	836.3	822.6
17.5°	926.5	910.1	896.4	880.0	871.8	863.6	847.2	828.1	814.4	795.3	778.9
20°	893.7	880.0	858.1	844.5	833.5	825.3	806.2	787.1	767.9	751.6	729.7
22.5°	855.4	839.0	819.9	800.7	792.5	781.6	762.5	740.6	724.2	705.1	683.2
25°	814.4	795.3	776.1	754.3	746.1	737.9	716.0	696.9	675.0	653.2	636.8
27.5°	765.2	748.8	729.7	707.8	699.6	688.7	664.1	642.2	620.4	598.5	579.4
30°	716.0	702.4	677.8	653.2	639.5	625.8	601.2	576.6	552.0	532.9	516.5
32.5°	666.8	639.5	612.2	584.8	568.4	554.8	532.9	511.1	489.2	472.8	453.7
35°	601.2	573.9	543.8	516.5	502.9	491.9	467.3	445.5	426.3	409.9	393.5
37.5°	532.9	505.6	478.3	450.9	440.0	429.1	404.5	385.3	366.2	352.5	336.1
40°	459.1	445.5	415.4	390.8	379.9	368.9	349.8	327.9	314.3	297.9	284.2
42.5°	390.8	377.1	355.3	333.4	322.5	314.3	295.2	278.8	265.1	251.4	240.5
45°	327.9	317.0	300.6	284.2	273.3	265.1	246.0	232.3	221.4	207.7	199.5
47.5°	273.3	265.1	254.2	237.8	229.6	221.4	205.0	194.0	183.1	174.9	166.7
50°	226.8	221.4	210.4	199.5	191.3	185.8	172.2	161.2	153.0	144.8	139.4
52.5°	191.3	183.1	174.9	164.0	158.5	153.0	144.8	133.9	128.4	120.2	114.8
55°	161.2	155.8	147.6	136.6	131.2	128.4	120.2	112.0	103.9	98.4	92.9
57.5°	136.6	131.2	123.0	114.8	112.0	106.6	98.4	90.2	84.7	82.0	76.5
60°	117.5	109.3	103.9	95.7	90.2	87.5	79.3	73.8	68.3	65.6	60.1
62.5°	98.4	92.9	84.7	76.5	73.8	71.1	65.6	60.1	54.7	51.9	46.5
65°	82.0	76.5	71.1	62.9	60.1	57.4	51.9	46.5	43.7	41.0	38.3
67.5°	68.3	62.9	57.4	51.9	49.2	43.7	41.0	38.3	32.8	30.1	27.3
70°	54.7	49.2	43.7	38.3	38.3	35.5	30.1	27.3	24.6	21.9	19.1
72.5°	43.7	38.3	35.5	30.1	27.3	27.3	24.6	21.9	19.1	16.4	13.7
75°	32.8	30.1	24.6	21.9	19.1	19.1	16.4	13.7	13.7	10.9	8.2
77.5°	24.6	21.9	19.1	16.4	13.7	13.7	10.9	8.2	8.2	5.5	5.5
80°	16.4	13.7	10.9	8.2	8.2	8.2	5.5	5.5	5.5	2.7	2.7
82.5°	8.2	8.2	5.5	5.5	5.5	5.5	2.7	2.7	2.7	2.7	0.0
85°	2.7	2.7	2.7	2.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	951.1	948.3	945.6	945.6	942.9	940.1	937.4	937.4	934.7	931.9	931.9
5°	934.7	929.2	923.7	921.0	918.3	912.8	910.1	904.6	901.9	896.4	893.7
7.5°	910.1	901.9	893.7	890.9	888.2	882.7	874.5	866.3	860.9	858.1	852.7
10°	882.7	871.8	860.9	855.4	852.7	841.7	833.5	825.3	819.9	811.7	803.5
12.5°	844.5	833.5	822.6	817.1	811.7	800.7	792.5	781.6	770.7	762.5	754.3
15°	806.2	792.5	778.9	773.4	765.2	754.3	743.4	732.4	721.5	710.6	702.4
17.5°	762.5	748.8	732.4	724.2	718.8	705.1	688.7	680.5	666.8	658.6	647.7
20°	716.0	699.6	683.2	677.8	669.6	653.2	639.5	625.8	614.9	604.0	593.0
22.5°	666.8	647.7	631.3	625.8	617.6	601.2	587.6	576.6	563.0	549.3	538.4
25°	617.6	598.5	582.1	571.2	563.0	549.3	532.9	522.0	508.3	497.4	489.2
27.5°	563.0	543.8	527.5	519.3	513.8	500.1	486.5	472.8	459.1	448.2	437.3
30°	500.1	486.5	472.8	467.3	459.1	448.2	434.5	423.6	409.9	399.0	388.1
32.5°	440.0	426.3	412.7	409.9	404.5	393.5	385.3	374.4	363.5	352.5	344.3
35°	382.6	368.9	360.7	355.3	349.8	341.6	333.4	327.9	319.8	308.8	300.6
37.5°	325.2	319.8	306.1	303.4	300.6	292.4	287.0	281.5	273.3	267.8	259.6
40°	276.0	267.8	259.6	256.9	251.4	246.0	240.5	235.0	229.6	226.8	218.6
42.5°	229.6	224.1	215.9	215.9	210.4	205.0	199.5	196.8	191.3	185.8	183.1
45°	194.0	185.8	183.1	177.6	177.6	172.2	166.7	164.0	158.5	153.0	147.6
47.5°	161.2	155.8	150.3	147.6	147.6	142.1	136.6	131.2	128.4	120.2	114.8
50°	133.9	128.4	125.7	123.0	120.2	117.5	112.0	106.6	101.1	95.7	87.5
52.5°	109.3	106.6	101.1	101.1	98.4	92.9	87.5	82.0	76.5	71.1	62.9
55°	90.2	84.7	82.0	79.3	76.5	73.8	68.3	62.9	57.4	49.2	43.7
57.5°	71.1	68.3	62.9	62.9	60.1	54.7	49.2	43.7	38.3	30.1	24.6
60°	57.4	51.9	49.2	46.5	43.7	41.0	32.8	27.3	21.9	16.4	8.2
62.5°	43.7	41.0	35.5	35.5	32.8	27.3	21.9	16.4	8.2	2.7	0.0
65°	32.8	30.1	27.3	24.6	21.9	16.4	10.9	5.5	2.7	0.0	0.0
67.5°	24.6	21.9	16.4	16.4	13.7	8.2	2.7	0.0	0.0	0.0	0.0
70°	16.4	13.7	10.9	8.2	5.5	2.7	0.0	0.0	0.0	0.0	0.0
72.5°	10.9	8.2	5.5	2.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0
75°	8.2	5.5	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	2.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	929.2	926.5	929.2	926.5	926.5	923.7	926.5	923.7
5°	890.9	888.2	888.2	885.5	885.5	885.5	882.7	882.7
7.5°	847.2	844.5	841.7	841.7	839.0	836.3	836.3	833.5
10°	800.7	795.3	789.8	792.5	787.1	787.1	784.3	784.3
12.5°	748.8	743.4	743.4	737.9	732.4	732.4	727.0	727.0
15°	696.9	691.4	686.0	683.2	677.8	677.8	675.0	672.3
17.5°	639.5	634.0	628.6	625.8	623.1	620.4	617.6	614.9
20°	584.8	576.6	573.9	571.2	565.7	563.0	560.2	563.0
22.5°	532.9	522.0	519.3	516.5	513.8	508.3	505.6	502.9
25°	478.3	470.1	464.6	464.6	459.1	456.4	450.9	453.7
27.5°	426.3	420.9	415.4	412.7	407.2	404.5	401.7	401.7
30°	379.9	371.7	368.9	363.5	360.7	355.3	352.5	352.5
32.5°	333.4	325.2	322.5	319.8	314.3	308.8	308.8	308.8
35°	292.4	284.2	281.5	276.0	270.6	265.1	265.1	265.1
37.5°	251.4	243.2	237.8	235.0	229.6	226.8	221.4	221.4
40°	213.2	205.0	199.5	196.8	191.3	185.8	183.1	183.1
42.5°	174.9	169.4	164.0	161.2	155.8	150.3	147.6	147.6
45°	139.4	133.9	131.2	128.4	123.0	114.8	112.0	112.0
47.5°	109.3	103.9	101.1	95.7	90.2	84.7	79.3	79.3
50°	82.0	76.5	71.1	68.3	62.9	57.4	51.9	51.9
52.5°	57.4	51.9	49.2	43.7	38.3	32.8	30.1	27.3
55°	35.5	30.1	27.3	24.6	19.1	16.4	10.9	10.9
57.5°	19.1	13.7	10.9	8.2	5.5	2.7	2.7	2.7
60°	5.5	2.7	2.7	2.7	2.7	2.7	2.7	2.7
62.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)