

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: P242026

Luminaire Tested: **PRS430D010-S4M24-41SWWMW-3000K**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P242026
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1802-584-63)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PRS430D010-S4M24-41SWWMW-3000K
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, WITH 4" WALL WASH DISTRIBUTION, WW TRIM MATTE WHITE
Light Source: ARRAYS OF HIGH LUMEN LEDS 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1460.2 lumens
Efficiency: N/A
Efficacy: 58.4 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.97 / 1.07
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')
CIE Type: Direct

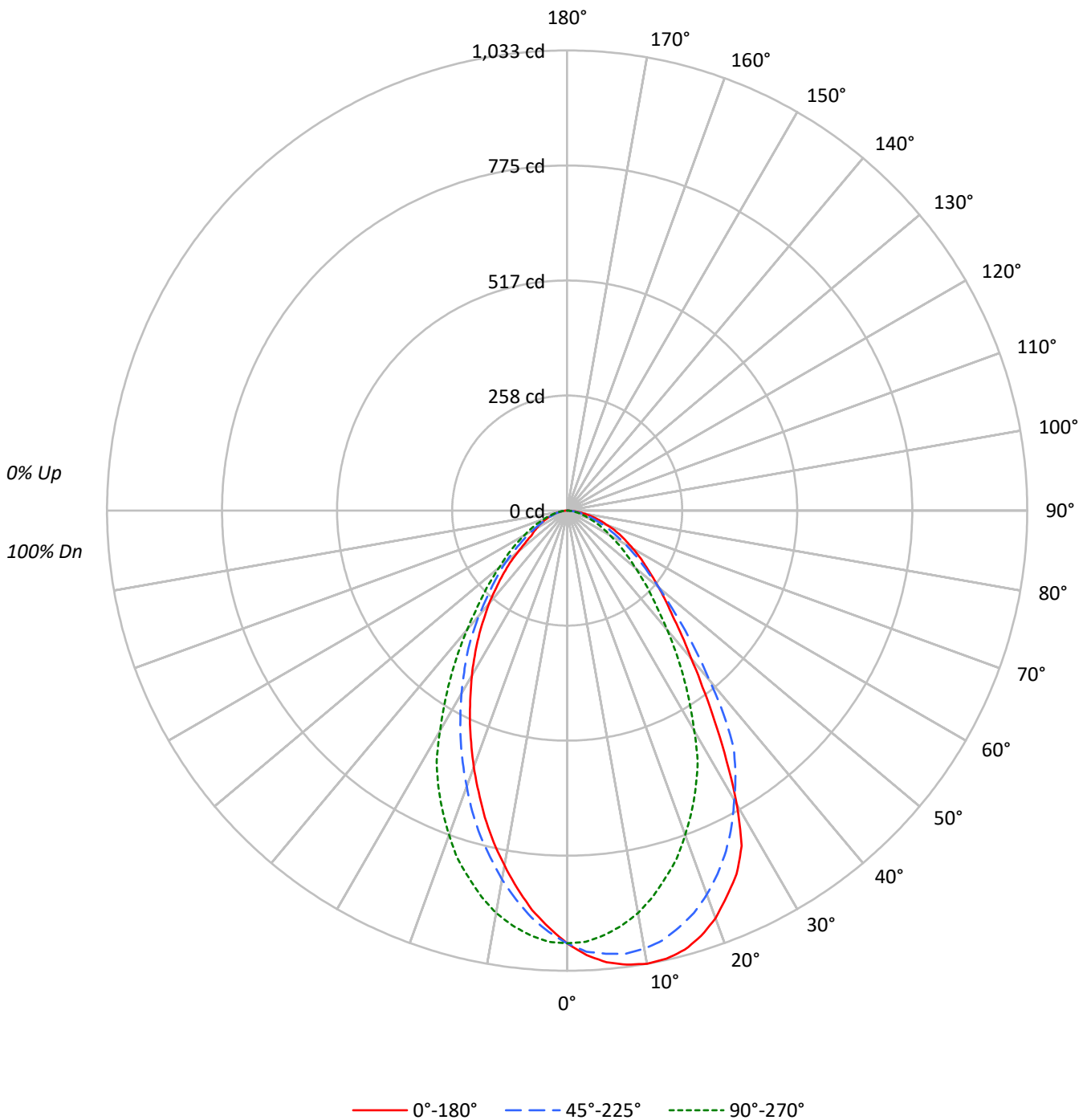
Input Watts (W): 25
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	111	107	104	101	109	105	102	99	101	98	96	97	95	93	94	92	91	89					89			
2	103	97	91	86	101	95	90	85	91	87	84	88	85	82	85	82	80	78					78			
3	96	87	81	75	94	86	80	75	83	78	73	80	76	72	78	74	71	69					69			
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	62					62			
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	55					55			
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50					50			
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45					45			
8	68	57	49	44	67	56	49	44	55	48	44	54	48	44	53	47	43	42					42			
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38					38			
10	61	49	42	37	60	49	42	37	48	41	37	47	41	37	46	41	37	35					35			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	74354	74354	74354
5°	78227	73509	69160
10°	80281	71296	62887
15°	80876	67626	56517
20°	79330	63104	49884
25°	76019	57743	43613
30°	67384	50432	37820
35°	54000	42516	32406
40°	43246	34892	27278
45°	36209	28751	22094
50°	31925	23721	16981
55°	28558	20351	13131
60°	25979	16947	12048
65°	24052	14707	11139
70°	21462	12107	9914
75°	19637	10173	8724
80°	17323	8684	7582
85°	10802	6499	6499



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.2	6.2
10°-20°	241.2	16.5
20°-30°	320.3	21.9
30°-40°	301.8	20.7
40°-50°	220.8	15.1
50°-60°	145.1	9.9
60°-70°	87.4	6.0
70°-80°	43.0	2.9
80°-90°	10.3	0.7
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°	651.7	44.6
0°-40°	953.5	65.3
0°-60°	1319.4	90.4
0°-90°	1460.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1460.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	971	971	971	971	971	
5°	1018	998	957	917	900	97
15°	1021	969	853	755	713	287
25°	900	844	684	566	516	409
35°	578	652	455	391	347	364
45°	334	366	266	236	204	263
55°	214	202	152	128	98	193
65°	133	108	81	59	62	131
75°	66	49	34	30	30	70
85°	12	10	7	7	7	17
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°	971.4	971.4	971.4	971.4	971.4	971.4	971.4	971.4	971.4	971.4	971.4
2.5°	998.5	998.5	998.5	998.5	996.0	996.0	996.0	993.6	993.6	991.1	991.1
5°	1018.1	1018.1	1015.7	1015.7	1013.2	1013.2	1010.8	1008.3	1005.8	1003.4	998.5
7.5°	1028.0	1028.0	1025.5	1025.5	1023.1	1023.1	1020.6	1018.1	1013.2	1008.3	1003.4
10°	1032.9	1030.4	1030.4	1028.0	1025.5	1023.1	1020.6	1018.1	1010.8	1005.8	998.5
12.5°	1030.4	1028.0	1028.0	1023.1	1020.6	1018.1	1015.7	1010.8	1003.4	996.0	988.6
15°	1020.6	1018.1	1015.7	1013.2	1008.3	1005.8	1003.4	996.0	988.6	978.8	969.0
17.5°	1000.9	998.5	998.5	993.6	988.6	986.2	983.7	976.3	966.5	956.7	946.8
20°	973.9	971.4	969.0	966.5	961.6	959.1	956.7	949.3	939.4	929.6	917.3
22.5°	937.0	934.5	934.5	932.1	927.1	924.7	922.2	914.9	907.5	895.2	882.9
25°	900.1	897.6	895.2	892.7	887.8	882.9	880.4	873.0	865.7	858.3	843.5
27.5°	848.5	850.9	850.9	848.5	846.0	843.5	841.1	831.2	821.4	811.6	799.3
30°	762.4	757.5	762.4	769.8	777.1	779.6	787.0	787.0	777.1	764.8	750.1
32.5°	666.5	668.9	671.4	681.2	691.1	693.5	698.4	713.2	725.5	718.1	703.4
35°	577.9	580.4	585.3	592.7	600.1	612.4	617.3	629.6	641.9	656.6	651.7
37.5°	499.2	501.7	506.6	511.5	523.8	528.7	538.6	548.4	568.1	580.4	577.9
40°	432.8	435.3	437.8	442.7	457.4	459.9	464.8	479.6	491.9	501.7	496.8
42.5°	381.2	378.7	383.6	388.6	395.9	398.4	403.3	413.2	423.0	427.9	427.9
45°	334.5	336.9	339.4	344.3	346.8	351.7	354.1	361.5	364.0	366.4	366.4
47.5°	300.0	300.0	302.5	305.0	307.4	309.9	312.3	314.8	314.8	314.8	312.3
50°	268.1	268.1	270.5	273.0	273.0	275.4	275.4	275.4	273.0	270.5	268.1
52.5°	238.6	238.6	241.0	243.5	243.5	243.5	243.5	241.0	238.6	236.1	231.2
55°	214.0	214.0	216.4	216.4	216.4	216.4	216.4	211.5	206.6	204.1	201.7
57.5°	191.8	191.8	191.8	191.8	191.8	191.8	189.4	184.4	182.0	177.1	174.6
60°	169.7	169.7	169.7	169.7	169.7	167.2	164.8	162.3	157.4	152.5	150.0
62.5°	150.0	150.0	150.0	150.0	147.6	145.1	145.1	140.2	137.7	132.8	127.9
65°	132.8	132.8	130.3	130.3	127.9	125.4	125.4	120.5	118.0	113.1	108.2
67.5°	115.6	113.1	113.1	113.1	110.7	108.2	105.7	103.3	100.8	95.9	91.0
70°	95.9	95.9	98.4	95.9	93.5	91.0	91.0	86.1	83.6	81.2	76.2
72.5°	81.2	81.2	81.2	78.7	78.7	76.2	73.8	71.3	68.9	66.4	61.5
75°	66.4	66.4	66.4	63.9	61.5	61.5	61.5	56.6	56.6	51.6	49.2
77.5°	51.6	51.6	51.6	49.2	49.2	49.2	46.7	44.3	41.8	41.8	39.3
80°	39.3	39.3	36.9	36.9	34.4	34.4	34.4	32.0	32.0	29.5	27.1
82.5°	27.1	24.6	24.6	24.6	24.6	24.6	22.1	22.1	19.7	19.7	17.2
85°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	9.8	9.8	9.8
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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°	971.4	971.4	971.4	971.4	971.4	971.4	971.4	971.4	971.4	971.4	971.4
2.5°	986.2	986.2	983.7	981.3	978.8	978.8	976.3	973.9	971.4	969.0	964.0
5°	996.0	991.1	986.2	981.3	981.3	978.8	971.4	966.5	961.6	956.7	951.7
7.5°	996.0	988.6	983.7	976.3	973.9	969.0	961.6	954.2	946.8	939.4	932.1
10°	991.1	981.3	973.9	964.0	959.1	954.2	944.4	934.5	924.7	917.3	905.0
12.5°	976.3	966.5	956.7	944.4	939.4	934.5	922.2	909.9	900.1	887.8	878.0
15°	956.7	946.8	934.5	922.2	914.9	909.9	895.2	880.4	865.7	853.4	841.1
17.5°	934.5	919.8	907.5	892.7	885.3	875.5	860.7	846.0	831.2	818.9	804.2
20°	902.6	890.3	873.0	855.8	848.5	838.6	823.9	806.6	791.9	774.7	759.9
22.5°	870.6	853.4	836.2	816.5	809.1	799.3	782.1	762.4	747.6	730.4	713.2
25°	828.8	811.6	794.3	777.1	764.8	757.5	740.2	720.6	703.4	683.7	666.5
27.5°	784.5	767.3	750.1	730.4	720.6	710.7	688.6	668.9	649.3	634.5	614.8
30°	735.3	720.6	700.9	673.8	661.5	651.7	627.1	605.0	585.3	570.6	558.3
32.5°	686.1	664.0	637.0	609.9	597.6	585.3	560.7	541.0	526.3	511.5	496.8
35°	622.2	597.6	573.0	548.4	536.1	523.8	504.2	484.5	467.3	455.0	442.7
37.5°	563.2	536.1	509.1	486.9	474.6	464.8	442.7	427.9	413.2	400.9	388.6
40°	491.9	477.1	447.6	427.9	415.6	405.8	386.1	371.4	359.1	349.2	339.4
42.5°	423.0	415.6	391.0	371.4	361.5	354.1	336.9	324.6	312.3	302.5	297.6
45°	361.5	351.7	341.8	322.2	314.8	307.4	292.7	280.4	270.5	265.6	258.2
47.5°	309.9	302.5	292.7	277.9	270.5	265.6	253.3	243.5	236.1	231.2	226.3
50°	263.1	258.2	250.8	241.0	233.6	228.7	218.9	211.5	204.1	199.2	196.7
52.5°	226.3	221.3	214.0	206.6	201.7	196.7	189.4	182.0	179.5	174.6	169.7
55°	194.3	189.4	184.4	177.1	174.6	172.1	164.8	159.9	154.9	152.5	150.0
57.5°	169.7	164.8	157.4	152.5	150.0	147.6	142.6	137.7	132.8	130.3	127.9
60°	145.1	140.2	135.3	130.3	127.9	125.4	123.0	118.0	113.1	110.7	110.7
62.5°	125.4	120.5	115.6	110.7	110.7	108.2	103.3	100.8	98.4	95.9	93.5
65°	105.7	100.8	98.4	93.5	91.0	91.0	88.5	83.6	81.2	81.2	78.7
67.5°	88.5	86.1	81.2	78.7	76.2	76.2	71.3	71.3	68.9	66.4	63.9
70°	73.8	68.9	66.4	63.9	63.9	61.5	59.0	59.0	56.6	54.1	51.6
72.5°	59.0	56.6	54.1	51.6	51.6	49.2	49.2	46.7	44.3	44.3	41.8
75°	46.7	44.3	44.3	39.3	39.3	39.3	36.9	36.9	34.4	34.4	32.0
77.5°	36.9	34.4	32.0	32.0	29.5	29.5	29.5	27.1	27.1	27.1	24.6
80°	24.6	24.6	22.1	22.1	22.1	22.1	19.7	19.7	19.7	19.7	17.2
82.5°	17.2	14.8	14.8	14.8	14.8	14.8	12.3	12.3	12.3	12.3	12.3
85°	9.8	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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°	971.4	971.4	971.4	971.4	971.4	971.4	971.4	971.4	971.4	971.4	971.4
2.5°	961.6	959.1	956.7	956.7	954.2	951.7	951.7	949.3	946.8	944.4	941.9
5°	946.8	941.9	937.0	934.5	932.1	929.6	924.7	919.8	917.3	912.4	909.9
7.5°	924.7	917.3	912.4	907.5	905.0	897.6	892.7	887.8	880.4	878.0	873.0
10°	897.6	887.8	878.0	875.5	870.6	863.2	855.8	846.0	841.1	836.2	831.2
12.5°	865.7	855.8	843.5	838.6	833.7	823.9	814.0	806.6	796.8	791.9	784.5
15°	828.8	816.5	804.2	799.3	794.3	782.1	772.2	762.4	755.0	745.2	737.8
17.5°	789.4	774.7	759.9	755.0	750.1	737.8	727.9	715.7	708.3	698.4	691.1
20°	745.2	730.4	715.7	713.2	703.4	691.1	678.8	668.9	659.1	651.7	641.9
22.5°	698.4	683.7	671.4	664.0	656.6	644.3	632.0	622.2	612.4	600.1	592.7
25°	654.2	637.0	622.2	619.7	609.9	600.1	587.8	575.5	565.6	555.8	548.4
27.5°	602.5	590.2	575.5	568.1	563.2	550.9	541.0	528.7	518.9	509.1	501.7
30°	543.5	531.2	521.4	516.4	511.5	504.2	491.9	484.5	474.6	464.8	457.4
32.5°	486.9	479.6	469.7	464.8	462.3	452.5	447.6	440.2	430.4	423.0	415.6
35°	430.4	425.5	415.6	415.6	410.7	405.8	400.9	395.9	391.0	383.6	376.3
37.5°	381.2	376.3	368.9	364.0	364.0	359.1	356.6	351.7	349.2	344.3	339.4
40°	334.5	327.1	322.2	319.7	317.2	314.8	309.9	307.4	307.4	305.0	300.0
42.5°	287.7	285.3	280.4	277.9	280.4	275.4	275.4	273.0	268.1	265.6	263.1
45°	253.3	248.4	248.4	245.9	245.9	243.5	241.0	238.6	236.1	231.2	231.2
47.5°	221.3	218.9	216.4	216.4	214.0	214.0	211.5	209.0	206.6	204.1	199.2
50°	194.3	191.8	189.4	189.4	186.9	186.9	184.4	182.0	179.5	174.6	169.7
52.5°	169.7	167.2	164.8	164.8	162.3	162.3	159.9	154.9	152.5	150.0	145.1
55°	147.6	145.1	142.6	142.6	140.2	140.2	137.7	132.8	127.9	125.4	120.5
57.5°	125.4	125.4	123.0	123.0	120.5	118.0	115.6	110.7	108.2	105.7	100.8
60°	108.2	105.7	105.7	103.3	103.3	100.8	95.9	93.5	88.5	86.1	81.2
62.5°	91.0	91.0	88.5	86.1	86.1	81.2	78.7	76.2	73.8	68.9	71.3
65°	76.2	73.8	73.8	71.3	71.3	66.4	63.9	61.5	59.0	59.0	61.5
67.5°	63.9	61.5	59.0	59.0	56.6	54.1	51.6	51.6	51.6	51.6	51.6
70°	51.6	49.2	46.7	46.7	46.7	44.3	41.8	41.8	41.8	44.3	44.3
72.5°	41.8	39.3	36.9	36.9	34.4	34.4	34.4	34.4	34.4	36.9	36.9
75°	32.0	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
77.5°	24.6	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1
80°	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
82.5°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
85°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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°	971.4	971.4	971.4	971.4	971.4	971.4	971.4	971.4
2.5°	941.9	941.9	941.9	939.4	939.4	939.4	939.4	937.0
5°	907.5	907.5	905.0	905.0	902.6	902.6	902.6	900.1
7.5°	868.1	865.7	865.7	863.2	860.7	858.3	858.3	855.8
10°	826.3	821.4	816.5	818.9	814.0	814.0	809.1	809.1
12.5°	779.6	774.7	774.7	769.8	764.8	764.8	762.4	762.4
15°	730.4	725.5	723.0	720.6	718.1	715.7	715.7	713.2
17.5°	681.2	678.8	676.3	673.8	668.9	666.5	664.0	661.5
20°	634.5	627.1	624.7	624.7	617.3	617.3	612.4	612.4
22.5°	585.3	577.9	577.9	575.5	570.6	565.6	565.6	563.2
25°	538.6	533.7	528.7	526.3	523.8	518.9	518.9	516.4
27.5°	491.9	486.9	484.5	482.0	477.1	474.6	472.2	469.7
30°	450.0	442.7	440.2	437.8	432.8	430.4	427.9	427.9
32.5°	408.2	400.9	400.9	395.9	393.5	388.6	386.1	386.1
35°	368.9	364.0	359.1	356.6	351.7	351.7	346.8	346.8
37.5°	329.5	324.6	324.6	319.7	314.8	312.3	309.9	307.4
40°	295.1	287.7	287.7	282.8	277.9	275.4	273.0	273.0
42.5°	260.7	253.3	250.8	248.4	243.5	238.6	238.6	236.1
45°	226.3	221.3	218.9	216.4	211.5	206.6	206.6	204.1
47.5°	194.3	191.8	186.9	184.4	182.0	177.1	174.6	174.6
50°	167.2	164.8	159.9	157.4	152.5	147.6	145.1	142.6
52.5°	140.2	137.7	135.3	132.8	127.9	123.0	120.5	118.0
55°	118.0	115.6	110.7	110.7	105.7	103.3	100.8	98.4
57.5°	95.9	93.5	91.0	91.0	88.5	88.5	88.5	88.5
60°	78.7	81.2	81.2	81.2	81.2	81.2	81.2	78.7
62.5°	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3
65°	61.5	61.5	61.5	61.5	61.5	61.5	61.5	61.5
67.5°	51.6	51.6	54.1	51.6	51.6	51.6	51.6	51.6
70°	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3
72.5°	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9
75°	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
77.5°	24.6	24.6	22.1	22.1	24.6	24.6	22.1	24.6
80°	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
82.5°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
85°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)