

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: P130051

Luminaire Tested: **HL618TAT - HLM6927 - HL6FL - 73PS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130051
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33459)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL618TAT - HLM6927 - HL6FL - 73PS
Description: HALO ALLSLOPE 6" 30W, Fresnel Glass Lens, White Polymer Trim Ring
"Dead Front", Wet Location - Showerlight using 40 Degree Optic at a 6-12
Pitch
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1394.9 lumens
Efficiency: N/A
Efficacy: 50.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 0.8 / 1.07
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

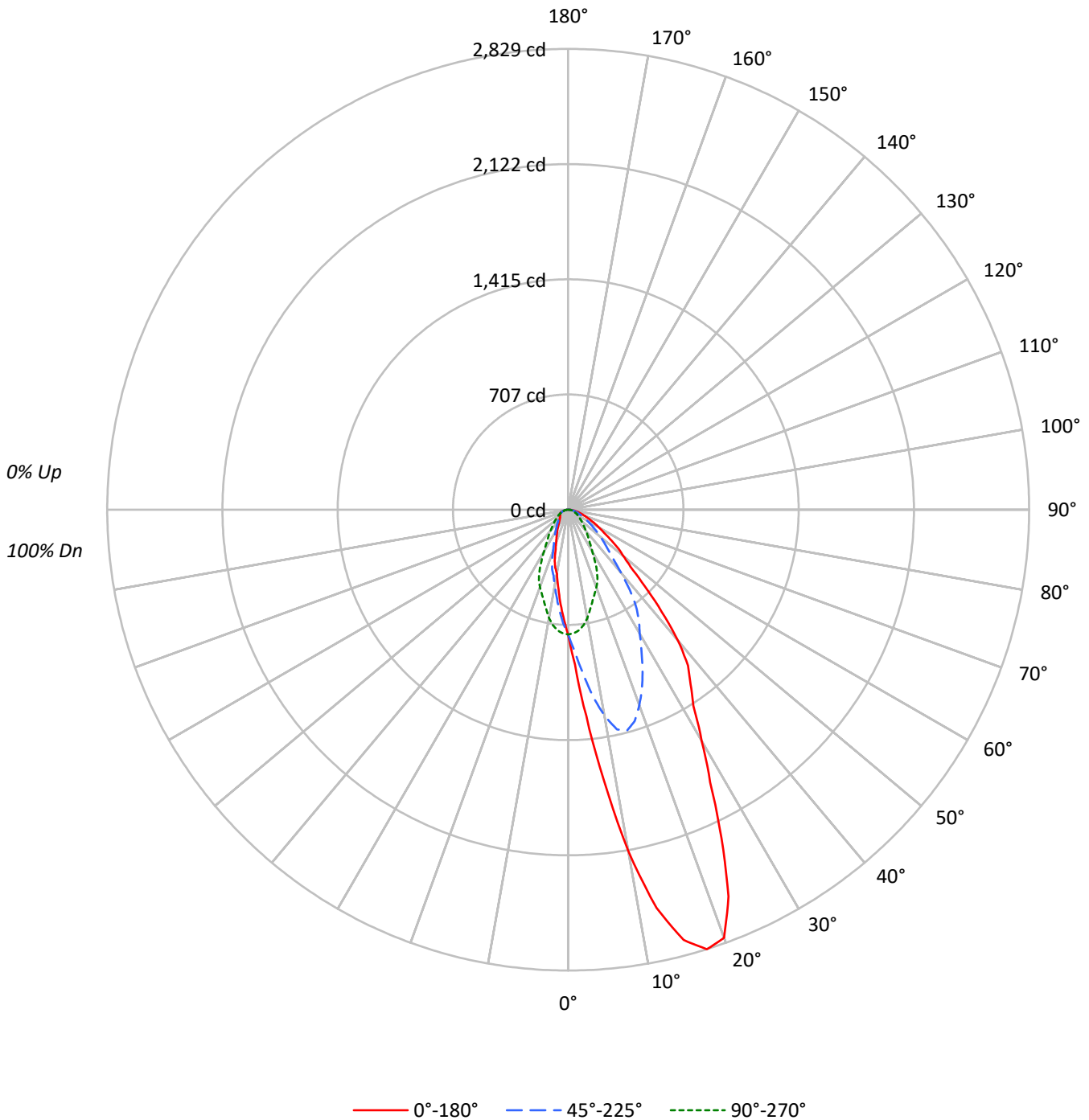
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				100
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89				89
2	103	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	80	79				79
3	96	88	81	76	94	86	80	76	84	79	74	81	77	73	79	75	72	70				70
4	90	80	73	68	88	79	72	67	77	71	66	74	70	65	72	68	65	63				63
5	84	74	66	61	82	72	66	60	71	64	60	69	63	59	67	62	59	57				57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	53	52				52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47				47
8	70	58	51	46	68	58	51	46	56	50	46	55	49	45	54	49	45	43				43
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	45	42	40				40
10	62	51	44	39	61	50	44	39	49	43	39	48	43	39	48	42	39	37				37

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	45729	45729	45729
5°	74380	43573	33032
10°	123458	39087	23107
15°	157745	33350	18409
20°	161967	29313	12453
25°	130351	24501	9610
30°	97960	17688	7589
35°	80434	13516	6082
40°	66849	10768	5161
45°	44158	8804	4802
50°	31039	7335	4514
55°	23537	6261	4828
60°	17823	5559	4660
65°	13586	4858	4768
70°	10491	4035	4539
75°	8337	3474	3937
80°	5759	2879	3017
85°	4071	1866	2036



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	5.8
10°-20°	270.7	19.4
20°-30°	330.4	23.7
30°-40°	274.9	19.7
40°-50°	184.4	13.2
50°-60°	118.8	8.5
60°-70°	76.0	5.5
70°-80°	43.1	3.1
80°-90°	15.2	1.1
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°	682.5	48.9
0°-40°	957.5	68.6
0°-60°	1260.6	90.4
0°-90°	1394.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1394.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	766	766	766	766	766	
5°	1270	1001	744	618	564	148
15°	2734	1402	578	379	319	756
25°	2224	1080	418	201	164	1013
35°	1309	726	220	122	99	824
45°	662	344	132	83	72	530
55°	312	187	83	64	64	286
65°	151	97	54	53	53	153
75°	72	47	30	33	34	75
85°	24	17	11	12	12	26
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°	766.1	766.1	766.1	766.1	766.1	766.1	766.1	766.1	766.1	766.1	766.1
2.5°	952.2	933.1	935.1	937.1	913.1	912.1	903.1	901.1	878.1	863.1	862.1
5°	1270.2	1226.2	1228.2	1209.2	1178.2	1150.2	1118.2	1090.2	1042.2	1001.2	974.2
7.5°	1669.3	1602.3	1618.3	1579.3	1504.2	1453.2	1381.2	1314.2	1227.2	1152.2	1082.2
10°	2132.3	2057.3	2058.3	2003.3	1884.3	1780.3	1668.3	1562.2	1405.2	1284.2	1174.2
12.5°	2504.4	2451.4	2430.4	2362.4	2207.3	2104.3	1943.3	1761.3	1562.2	1381.2	1234.2
15°	2734.4	2672.4	2658.4	2582.4	2424.4	2288.4	2089.3	1866.3	1626.3	1402.2	1231.2
17.5°	2829.4	2767.4	2752.4	2660.4	2478.4	2318.4	2084.3	1837.3	1583.3	1359.2	1186.2
20°	2796.4	2691.4	2691.4	2571.4	2353.4	2172.3	1949.3	1706.3	1478.2	1276.2	1128.2
22.5°	2570.4	2506.4	2466.4	2338.4	2128.3	1971.3	1748.3	1550.2	1358.2	1184.2	1053.2
25°	2224.4	2158.3	2127.3	2021.3	1832.3	1715.3	1542.2	1371.2	1225.2	1080.2	966.2
27.5°	1887.3	1832.3	1816.3	1735.3	1596.3	1491.2	1356.2	1222.2	1096.2	973.2	879.1
30°	1639.3	1589.3	1579.3	1509.2	1393.2	1279.2	1196.2	1087.2	985.2	878.1	799.1
32.5°	1429.2	1398.2	1382.2	1318.2	1227.2	1162.2	1079.2	988.2	901.1	806.1	732.1
35°	1309.2	1273.2	1259.2	1207.2	1121.2	1063.2	988.2	905.1	818.1	726.1	651.1
37.5°	1207.2	1174.2	1157.2	1109.2	1027.2	961.2	886.1	800.1	711.1	621.1	551.1
40°	1049.2	1016.2	1009.2	959.2	884.1	822.1	752.1	667.1	581.1	502.1	446.1
42.5°	848.1	827.1	820.1	788.1	714.1	663.1	596.1	528.1	471.1	408.1	363.1
45°	662.1	642.1	629.1	602.1	552.1	526.1	473.1	426.1	385.1	344.1	315.0
47.5°	517.1	510.1	509.1	487.1	452.1	432.1	395.1	362.1	330.1	298.0	273.0
50°	440.1	427.1	426.1	416.1	390.1	374.1	342.1	313.0	289.0	261.0	237.0
52.5°	384.1	374.1	369.1	354.1	327.1	316.1	289.0	267.0	246.0	222.0	204.0
55°	312.0	307.0	303.0	293.0	272.0	260.0	243.0	223.0	206.0	187.0	173.0
57.5°	258.0	252.0	251.0	244.0	228.0	220.0	206.0	188.0	175.0	159.0	147.0
60°	218.0	213.0	210.0	204.0	191.0	185.0	174.0	159.0	149.0	134.0	126.0
62.5°	182.0	178.0	175.0	170.0	161.0	155.0	147.0	136.0	126.0	115.0	107.0
65°	151.0	148.0	146.0	142.0	134.0	130.0	123.0	115.0	106.0	97.0	91.0
67.5°	125.0	124.0	123.0	118.0	112.0	110.0	103.0	96.0	90.0	82.0	76.0
70°	104.0	103.0	102.0	99.0	94.0	91.0	86.0	80.0	75.0	68.0	64.0
72.5°	84.0	84.0	83.0	81.0	76.0	74.0	69.0	65.0	61.0	56.0	53.0
75°	72.0	71.0	70.0	67.0	64.0	62.0	59.0	55.0	51.0	47.0	44.0
77.5°	56.0	55.0	55.0	54.0	51.0	50.0	47.0	44.0	42.0	40.0	38.0
80°	42.0	41.0	41.0	40.0	38.0	37.0	36.0	33.0	32.0	29.0	28.0
82.5°	36.0	35.0	34.0	33.0	31.0	31.0	28.0	26.0	24.0	22.0	21.0
85°	24.0	23.0	23.0	23.0	22.0	22.0	20.0	19.0	19.0	17.0	16.0
87.5°	15.0	14.0	14.0	14.0	13.0	13.0	13.0	11.0	11.0	10.0	10.0
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	766.1	766.1	766.1	766.1	766.1	766.1	766.1	766.1	766.1	766.1	766.1
2.5°	850.1	838.1	827.1	815.1	797.1	796.1	774.1	759.1	744.1	751.1	730.1
5°	944.1	912.1	883.1	855.1	823.1	806.1	771.1	744.1	720.1	718.1	691.1
7.5°	1016.2	960.2	914.1	872.1	825.1	799.1	754.1	716.1	684.1	672.1	638.1
10°	1072.2	989.2	922.1	866.1	808.1	771.1	714.1	675.1	635.1	618.1	581.1
12.5°	1097.2	990.2	911.1	850.1	776.1	732.1	675.1	624.1	583.1	565.1	532.1
15°	1087.2	971.2	889.1	817.1	742.1	687.1	625.1	578.1	549.1	521.1	486.1
17.5°	1051.2	936.1	852.1	775.1	699.1	646.1	587.1	540.1	502.1	481.1	447.1
20°	997.2	894.1	808.1	733.1	657.1	608.1	547.1	506.1	468.1	444.1	404.1
22.5°	935.1	834.1	754.1	684.1	612.1	566.1	514.1	470.1	426.1	403.1	359.1
25°	853.1	769.1	695.1	631.1	566.1	522.1	463.1	418.1	369.1	342.1	301.0
27.5°	784.1	705.1	640.1	581.1	513.1	464.1	403.1	355.1	311.0	285.0	253.0
30°	719.1	646.1	573.1	515.1	445.1	392.1	340.1	296.0	260.0	243.0	221.0
32.5°	658.1	574.1	507.1	442.1	376.1	325.1	284.0	253.0	227.0	214.0	195.0
35°	569.1	487.1	428.1	364.1	309.0	277.0	244.0	220.0	199.0	187.0	171.0
37.5°	469.1	402.1	342.1	300.0	263.0	241.0	213.0	192.0	174.0	165.0	152.0
40°	377.1	327.1	288.0	260.0	231.0	210.0	185.0	169.0	155.0	146.0	135.0
42.5°	320.1	285.0	251.0	227.0	201.0	184.0	164.0	148.0	136.0	129.0	119.0
45°	280.0	252.0	223.0	201.0	178.0	163.0	145.0	132.0	122.0	115.0	107.0
47.5°	244.0	219.0	198.0	177.0	157.0	145.0	129.0	117.0	107.0	103.0	95.0
50°	214.0	191.0	171.0	154.0	138.0	127.0	114.0	104.0	97.0	94.0	88.0
52.5°	184.0	165.0	148.0	135.0	121.0	112.0	101.0	93.0	88.0	85.0	81.0
55°	155.0	141.0	127.0	116.0	105.0	99.0	90.0	83.0	79.0	78.0	73.0
57.5°	133.0	120.0	111.0	101.0	93.0	87.0	80.0	76.0	72.0	71.0	68.0
60°	114.0	103.0	95.0	88.0	81.0	77.0	72.0	68.0	64.0	64.0	62.0
62.5°	97.0	88.0	82.0	76.0	70.0	67.0	63.0	60.0	58.0	58.0	57.0
65°	84.0	75.0	70.0	66.0	62.0	60.0	56.0	54.0	52.0	52.0	51.0
67.5°	71.0	64.0	60.0	57.0	53.0	51.0	48.0	47.0	46.0	45.0	44.0
70°	60.0	55.0	51.0	48.0	45.0	44.0	41.0	40.0	39.0	40.0	39.0
72.5°	50.0	46.0	43.0	41.0	39.0	38.0	36.0	35.0	34.0	34.0	34.0
75°	41.0	38.0	36.0	34.0	33.0	32.0	31.0	30.0	29.0	30.0	29.0
77.5°	35.0	32.0	30.0	29.0	28.0	27.0	26.0	26.0	25.0	25.0	25.0
80°	27.0	25.0	24.0	22.0	22.0	21.0	21.0	21.0	20.0	21.0	21.0
82.5°	20.0	18.0	17.0	17.0	16.0	16.0	16.0	16.0	15.0	16.0	16.0
85°	15.0	14.0	13.0	12.0	12.0	12.0	12.0	11.0	11.0	11.0	11.0
87.5°	9.0	8.0	7.0	7.0	6.0	7.0	6.0	6.0	6.0	6.0	6.0
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	766.1	766.1	766.1	766.1	766.1	766.1	766.1	766.1	766.1	766.1	766.1
2.5°	717.1	711.1	711.1	688.1	684.1	698.1	682.1	670.1	677.1	668.1	672.1
5°	671.1	659.1	650.1	627.1	619.1	618.1	602.1	584.1	584.1	579.1	578.1
7.5°	612.1	594.1	580.1	556.1	545.1	541.1	523.1	504.1	502.1	493.1	490.1
10°	550.1	534.1	515.1	491.1	479.1	470.1	448.1	434.1	427.1	418.1	414.1
12.5°	496.1	480.1	461.1	432.1	419.1	414.1	396.1	386.1	384.1	378.1	376.1
15°	455.1	432.1	415.1	392.1	382.1	379.1	362.1	351.1	346.1	338.1	330.1
17.5°	417.1	393.1	378.1	355.1	342.1	330.1	309.0	294.0	281.0	277.0	270.0
20°	376.1	350.1	326.1	301.0	283.0	271.0	251.0	240.0	237.0	230.0	225.0
22.5°	316.1	298.0	272.0	250.0	236.0	230.0	218.0	209.0	206.0	200.0	197.0
25°	270.0	248.0	232.0	218.0	206.0	201.0	190.0	183.0	180.0	175.0	173.0
27.5°	232.0	216.0	204.0	191.0	181.0	177.0	168.0	161.0	158.0	153.0	151.0
30°	202.0	190.0	180.0	167.0	160.0	155.0	148.0	141.0	139.0	136.0	133.0
32.5°	179.0	169.0	159.0	148.0	141.0	137.0	131.0	125.0	123.0	120.0	118.0
35°	159.0	149.0	141.0	129.0	125.0	122.0	116.0	110.0	109.0	106.0	104.0
37.5°	140.0	133.0	125.0	116.0	111.0	109.0	104.0	99.0	98.0	95.0	94.0
40°	124.0	118.0	112.0	102.0	100.0	99.0	94.0	89.0	89.0	87.0	86.0
42.5°	110.0	106.0	100.0	95.0	91.0	90.0	86.0	83.0	83.0	81.0	80.0
45°	99.0	96.0	92.0	87.0	84.0	83.0	80.0	77.0	77.0	76.0	76.0
47.5°	91.0	87.0	84.0	80.0	77.0	77.0	74.0	72.0	72.0	71.0	71.0
50°	83.0	81.0	78.0	75.0	72.0	72.0	69.0	67.0	68.0	68.0	67.0
52.5°	76.0	75.0	73.0	70.0	68.0	68.0	66.0	64.0	65.0	64.0	64.0
55°	70.0	70.0	68.0	66.0	64.0	64.0	62.0	61.0	62.0	63.0	63.0
57.5°	66.0	65.0	64.0	62.0	62.0	62.0	61.0	60.0	61.0	61.0	61.0
60°	60.0	61.0	60.0	59.0	58.0	59.0	58.0	56.0	57.0	57.0	58.0
62.5°	55.0	56.0	56.0	56.0	56.0	56.0	56.0	55.0	57.0	58.0	58.0
65°	50.0	51.0	51.0	51.0	51.0	53.0	52.0	51.0	52.0	53.0	53.0
67.5°	44.0	45.0	45.0	45.0	45.0	46.0	46.0	45.0	46.0	47.0	48.0
70°	38.0	40.0	40.0	40.0	41.0	42.0	42.0	41.0	43.0	44.0	46.0
72.5°	33.0	34.0	35.0	35.0	36.0	38.0	38.0	38.0	39.0	39.0	39.0
75°	29.0	30.0	30.0	31.0	31.0	33.0	33.0	33.0	34.0	34.0	34.0
77.5°	25.0	25.0	26.0	26.0	27.0	28.0	28.0	28.0	29.0	29.0	29.0
80°	20.0	21.0	21.0	22.0	22.0	22.0	22.0	22.0	23.0	23.0	24.0
82.5°	15.0	16.0	16.0	17.0	17.0	17.0	17.0	17.0	18.0	18.0	18.0
85°	11.0	11.0	11.0	12.0	11.0	12.0	12.0	12.0	12.0	12.0	12.0
87.5°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	5.0
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):

	165°	170°	175°	180°
0°	766.1	766.1	766.1	766.1
2.5°	670.1	664.1	659.1	660.1
5°	575.1	562.1	569.1	564.1
7.5°	488.1	481.1	477.1	473.1
10°	410.1	398.1	401.1	399.1
12.5°	371.1	367.1	367.1	365.1
15°	328.1	322.1	320.1	319.1
17.5°	261.0	257.0	256.0	255.0
20°	223.0	218.0	216.0	215.0
22.5°	194.0	190.0	189.0	187.0
25°	171.0	166.0	166.0	164.0
27.5°	148.0	146.0	145.0	144.0
30°	132.0	129.0	128.0	127.0
32.5°	119.0	114.0	113.0	112.0
35°	102.0	101.0	99.0	99.0
37.5°	93.0	91.0	91.0	90.0
40°	85.0	83.0	82.0	81.0
42.5°	80.0	78.0	77.0	77.0
45°	75.0	74.0	73.0	72.0
47.5°	71.0	70.0	69.0	68.0
50°	67.0	66.0	66.0	64.0
52.5°	65.0	65.0	65.0	64.0
55°	64.0	64.0	65.0	64.0
57.5°	61.0	61.0	60.0	59.0
60°	59.0	59.0	59.0	57.0
62.5°	58.0	57.0	58.0	57.0
65°	53.0	53.0	54.0	53.0
67.5°	50.0	50.0	50.0	49.0
70°	46.0	46.0	45.0	45.0
72.5°	40.0	40.0	40.0	40.0
75°	34.0	34.0	34.0	34.0
77.5°	29.0	28.0	28.0	28.0
80°	23.0	22.0	22.0	22.0
82.5°	18.0	18.0	18.0	17.0
85°	12.0	12.0	12.0	12.0
87.5°	5.0	5.0	5.0	5.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)