

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: P284771

Luminaire Tested: **HLB4S06930**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P284771  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( GONIOTESTING)  
Test Lab: UL-CCIC  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HLB4S06930  
Description: 4 IN SQUARE HALO BLADE (600 LUMEN) - 3000K  
Light Source: -  
Ballast/Driver: -

**Summary**

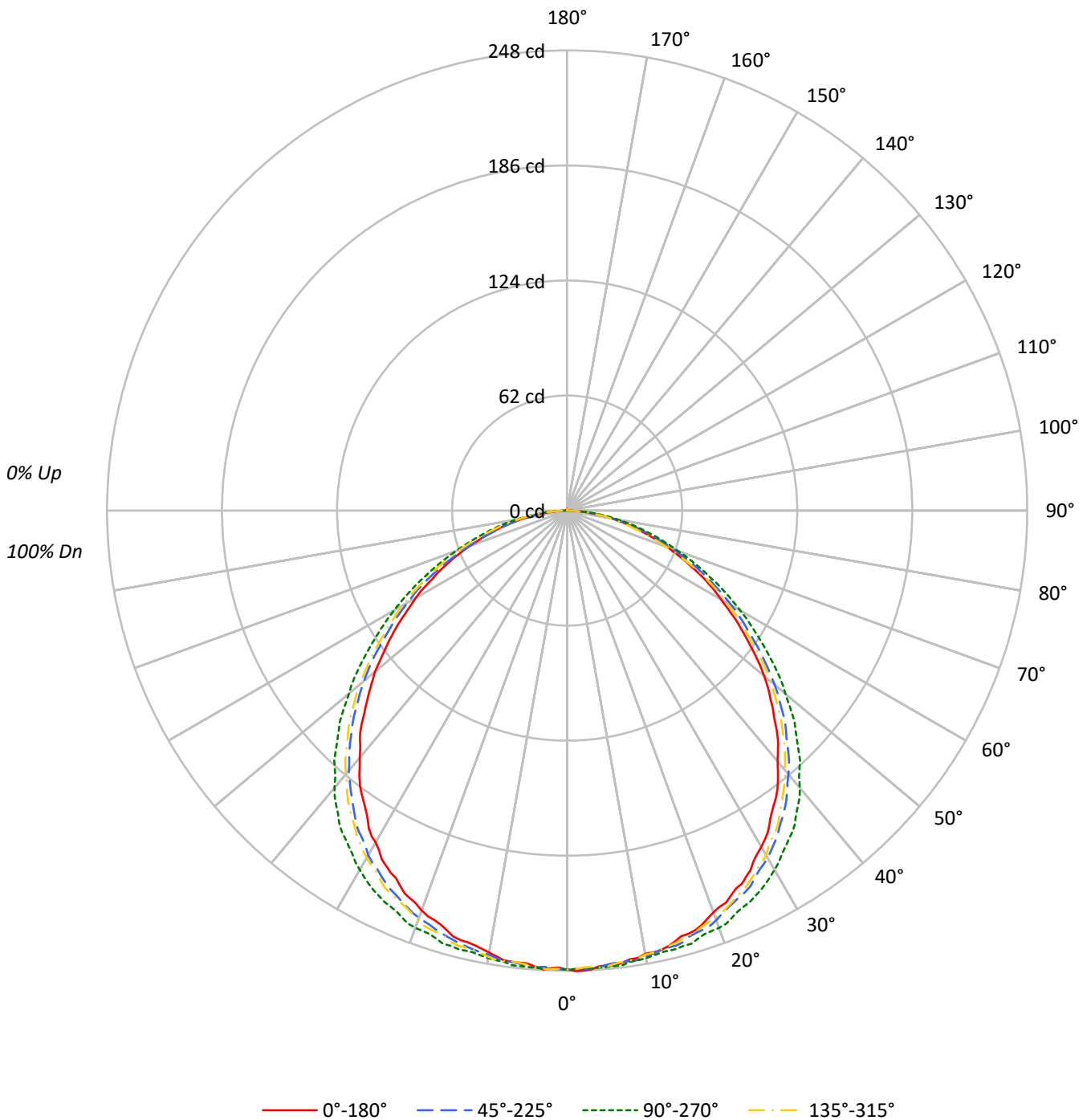
Lumens per Lamp: N/A  
Luminaire Lumens: 695.8 lumens  
Efficiency: N/A  
Efficacy: 68.9 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.33 / 1.38  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 10.1  
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	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84					84			
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70					70			
3	91	80	72	66	88	78	71	65	75	69	64	73	67	63	70	65	62	59					59			
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	51					51			
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44					44			
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39					39			
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34					34			
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30					30			
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27					27			
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25					25			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	30394	30394	30394	30394
5°	30325	30436	30214	30436
10°	30252	30563	30177	30563
15°	30207	30881	30220	30881
20°	30122	31286	29978	31286
25°	30120	31557	29619	31557
30°	29691	31720	29280	31720
35°	29110	31720	28690	31720
40°	28306	31289	27905	31289
45°	27399	30422	26860	30422
50°	26490	29338	25840	29338
55°	24996	28016	24460	28016
60°	23563	26512	23146	26512
65°	22209	24738	21744	24738
70°	20582	22917	20079	22917
75°	18939	21265	18465	21265
80°	17192	19597	16343	19597
85°	14519	17620	13391	17620



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.4	3.4
10°-20°	67.8	9.7
20°-30°	104.2	15.0
30°-40°	125.8	18.1
40°-50°	127.5	18.3
50°-60°	109.6	15.8
60°-70°	79.3	11.4
70°-80°	43.9	6.3
80°-90°	12.7	1.8
90°-100°	0.3	0.0
100°-110°	0.1	0.0
110°-120°	0.1	0.0
120°-130°	0.2	0.0
130°-140°	0.2	0.0
140°-150°	0.2	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	195.4	28.1
0°-40°	321.2	46.2
0°-60°	558.4	80.3
0°-90°	694.1	99.8
90°-120°	0.5	0.1
90°-150°	1.2	0.2
90°-180°	2.0	0.3
0°-180°	695.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	247	247	247	247	247	
5°	246	247	245	247	246	23
15°	238	243	238	243	238	67
25°	222	233	218	233	222	102
35°	194	212	191	212	194	121
45°	158	175	155	175	158	122
55°	117	131	114	131	117	105
65°	76	85	75	85	76	76
75°	40	45	39	45	40	42
85°	10	12	10	12	10	11
90°	0	1	0	1	0	1
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	1	1	1	1	1	0
175°	1	1	1	1	1	0
180°	1	1	1	1	1	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	247.4	247.4	247.4	247.4	247.4	247.4	247.4	247.4	247.4	247.4	247.4
1°	248.2	247.2	246.9	246.9	247.1	247.6	247.2	247.1	246.4	247.1	247.2
2°	248.2	247.3	247.3	246.8	247.1	247.1	246.5	247.2	246.8	247.2	246.5
3°	247.7	247.5	247.4	247.3	247.1	246.9	246.2	246.3	247.6	246.3	246.2
4°	246.3	246.2	246.7	246.8	247.0	246.6	246.8	245.8	246.4	245.8	246.8
5°	245.9	246.2	245.7	246.8	246.8	246.4	246.7	246.5	245.0	246.5	246.7
6°	246.6	246.2	245.2	246.8	246.9	246.1	245.6	246.0	245.0	246.0	245.6
7°	245.4	245.6	244.8	246.4	246.8	245.8	245.1	244.8	245.0	244.8	245.1
8°	244.2	244.5	245.3	245.2	245.5	245.6	244.8	244.0	244.8	244.0	244.8
9°	244.1	243.4	245.2	245.1	245.4	245.2	244.2	243.4	243.3	243.4	244.2
10°	242.5	243.0	244.2	245.1	245.0	244.4	243.0	242.8	241.9	242.8	243.0
11°	242.6	242.9	243.2	243.8	244.2	244.0	242.8	242.2	240.6	242.2	242.8
12°	242.3	241.9	242.0	243.6	243.5	243.6	241.9	240.7	239.5	240.7	241.9
13°	241.1	240.8	241.7	243.1	243.4	243.2	241.1	239.4	238.7	239.4	241.1
14°	239.4	239.8	241.7	242.3	243.5	242.5	240.3	238.9	238.5	238.9	240.3
15°	237.5	238.4	240.8	242.2	242.8	242.3	239.3	238.3	237.6	238.3	239.3
16°	237.2	237.5	238.9	242.1	242.8	241.5	238.3	236.3	235.2	236.3	238.3
17°	236.4	236.3	237.9	240.5	241.3	240.8	237.2	234.6	233.2	234.6	237.2
18°	234.8	235.1	237.5	239.7	240.0	239.4	235.7	232.9	232.0	232.9	235.7
19°	232.5	233.5	236.6	239.1	239.6	237.7	234.6	232.4	231.1	232.4	234.6
20°	230.4	231.6	234.9	238.3	239.3	237.7	233.5	231.0	229.3	231.0	233.5
21°	228.9	229.9	232.9	236.7	238.6	236.6	232.3	228.6	227.0	228.6	232.3
22°	228.1	228.5	231.0	234.6	236.9	234.8	230.4	226.1	225.5	226.1	230.4
23°	225.6	226.7	229.5	234.0	234.9	232.7	228.7	224.4	224.2	224.4	228.7
24°	223.2	224.7	228.1	233.3	233.8	231.6	226.8	223.1	221.3	223.1	226.8
25°	222.2	222.7	226.9	231.1	232.8	230.6	225.3	220.8	218.5	220.8	225.3
26°	219.8	220.5	225.3	228.8	231.2	228.6	223.2	217.6	217.0	217.6	223.2
27°	217.5	217.7	222.4	227.3	229.7	226.0	220.9	216.1	214.9	216.1	220.9
28°	214.0	215.3	220.0	225.9	227.8	224.0	218.5	213.7	212.8	213.7	218.5
29°	211.4	213.3	218.1	223.5	225.7	222.8	216.8	210.7	209.2	210.7	216.8
30°	209.3	210.9	216.2	221.5	223.6	221.0	214.5	208.3	206.4	208.3	214.5
31°	206.9	208.4	213.6	219.1	221.3	218.1	211.0	205.8	204.6	205.8	211.0
32°	204.3	205.5	210.9	216.7	218.4	215.0	208.3	202.1	201.8	202.1	208.3
33°	200.4	202.3	208.3	214.4	216.0	212.2	206.2	199.0	197.6	199.0	206.2
34°	196.9	198.7	205.0	211.3	213.6	209.7	203.5	196.5	194.2	196.5	203.5
35°	194.1	196.4	202.1	207.8	211.5	207.3	199.8	193.6	191.3	193.6	199.8
36°	191.3	193.7	199.3	205.3	208.8	204.7	196.4	190.2	188.5	190.2	196.4
37°	188.3	189.7	196.2	202.7	205.1	201.0	193.0	187.0	185.5	187.0	193.0
38°	184.6	185.7	192.7	199.2	202.0	197.0	189.8	183.8	181.9	183.8	189.8
39°	180.5	183.1	188.7	195.5	199.0	194.2	186.3	180.1	177.7	180.1	186.3
40°	176.5	179.9	185.5	192.6	195.1	190.7	183.0	176.0	174.0	176.0	183.0
41°	173.1	175.3	182.2	188.0	190.5	186.9	179.0	172.0	169.9	172.0	179.0
42°	170.0	171.4	178.5	184.2	187.2	183.0	175.4	168.2	166.9	168.2	175.4
43°	166.2	168.0	174.3	180.3	184.1	179.6	171.6	165.0	163.5	165.0	171.6
44°	162.2	164.7	170.1	176.6	179.5	175.4	167.5	161.1	159.4	161.1	167.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	157.7	160.3	166.7	172.7	175.1	171.0	163.8	156.8	154.6	156.8	163.8
46°	154.2	156.2	163.0	169.0	171.3	167.5	159.9	152.9	150.6	152.9	159.9
47°	150.1	152.3	158.5	165.0	167.6	162.7	155.1	149.2	146.6	149.2	155.1
48°	146.6	148.3	154.1	160.4	163.0	158.7	151.2	145.2	142.7	145.2	151.2
49°	142.7	144.1	150.3	155.4	158.1	154.4	147.3	140.7	138.8	140.7	147.3
50°	138.6	140.2	145.9	151.2	153.5	149.9	142.9	136.5	135.2	136.5	142.9
51°	134.5	135.9	141.3	147.2	149.5	145.1	138.5	132.8	130.6	132.8	138.5
52°	130.0	131.5	137.0	142.3	145.2	140.5	134.4	128.3	126.2	128.3	134.4
53°	125.4	127.5	132.4	137.4	140.3	135.9	130.0	123.8	122.1	123.8	130.0
54°	120.9	123.7	128.1	132.8	135.4	131.1	125.1	119.6	118.1	119.6	125.1
55°	116.7	119.5	123.4	128.4	130.8	126.5	120.5	115.7	114.2	115.7	120.5
56°	112.5	114.9	118.9	123.7	126.0	122.1	116.1	111.3	110.2	111.3	116.1
57°	108.7	110.7	114.9	118.9	121.5	117.5	112.2	107.4	105.9	107.4	112.2
58°	103.9	106.8	110.8	114.5	116.9	113.1	108.2	103.3	101.6	103.3	108.2
59°	99.8	102.4	106.8	110.5	112.5	108.5	103.6	99.3	97.8	99.3	103.6
60°	95.9	98.3	102.3	106.2	107.9	104.0	99.3	94.9	94.2	94.9	99.3
61°	92.3	94.3	98.0	101.7	103.1	99.9	95.4	91.4	90.4	91.4	95.4
62°	88.5	89.8	93.8	97.0	98.9	96.0	91.5	87.1	86.2	87.1	91.5
63°	84.6	86.0	89.6	92.9	94.3	91.6	87.0	82.6	82.0	82.6	87.0
64°	80.7	81.8	85.4	88.7	90.0	87.0	82.6	78.7	78.5	78.7	82.6
65°	76.4	77.9	81.1	84.2	85.1	82.5	78.4	74.8	74.8	74.8	78.4
66°	72.4	73.8	77.1	80.1	81.0	78.5	74.0	70.6	70.9	70.6	74.0
67°	68.8	70.0	73.0	75.9	76.6	74.5	69.7	66.3	67.1	66.3	69.7
68°	64.9	66.2	68.9	71.9	72.3	70.4	65.4	62.1	63.3	62.1	65.4
69°	60.9	62.2	64.8	67.7	68.0	66.1	61.0	58.2	59.5	58.2	61.0
70°	57.3	58.4	60.9	63.5	63.8	62.1	56.7	54.4	55.9	54.4	56.7
71°	53.8	54.7	57.1	59.7	59.8	58.4	52.5	50.6	52.2	50.6	52.5
72°	50.2	51.0	53.3	55.9	55.9	54.6	48.6	46.8	48.8	46.8	48.6
73°	46.5	47.4	49.6	52.1	52.1	50.8	44.6	43.2	45.7	43.2	44.6
74°	43.0	44.1	46.0	48.3	48.5	47.1	40.9	39.7	42.3	39.7	40.9
75°	39.9	40.6	42.4	44.6	44.8	43.7	37.3	36.3	38.9	36.3	37.3
76°	36.6	37.4	39.0	41.2	41.3	40.0	34.6	33.2	35.7	33.2	34.6
77°	33.4	34.2	35.7	37.7	37.8	36.3	31.6	30.4	32.4	30.4	31.6
78°	30.3	31.0	32.4	34.3	34.3	32.7	28.8	27.5	29.2	27.5	28.8
79°	27.3	27.9	29.0	31.0	31.0	29.3	25.9	24.7	26.1	24.7	25.9
80°	24.3	24.7	26.0	27.7	27.7	26.2	23.1	21.9	23.1	21.9	23.1
81°	21.3	21.9	23.1	24.6	24.5	23.2	20.5	19.2	20.2	19.2	20.5
82°	18.2	18.9	20.1	21.4	21.4	20.2	17.9	16.5	17.2	16.5	17.9
83°	15.4	16.0	17.3	18.4	18.3	17.3	15.4	13.7	14.4	13.7	15.4
84°	12.8	13.2	14.6	15.5	15.4	14.4	12.9	11.2	11.8	11.2	12.9
85°	10.3	10.6	12.0	12.7	12.5	11.7	10.3	8.9	9.5	8.9	10.3
86°	8.1	8.3	9.4	9.9	9.8	9.0	7.9	6.8	7.4	6.8	7.9
87°	5.8	6.2	6.9	7.2	7.0	6.4	5.5	4.8	5.2	4.8	5.5
88°	3.6	4.1	4.4	4.7	4.4	3.9	3.3	2.8	3.2	2.8	3.3
89°	1.5	2.1	2.3	2.6	2.4	2.1	1.6	1.2	1.3	1.2	1.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.3	0.8	1.1	1.3	1.2	1.0	0.7	0.4	0.3	0.4	0.7
91°	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.2	0.4	0.4
92°	0.3	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.2	0.4	0.4
93°	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3
94°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
95°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
96°	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2
97°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
98°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
99°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
100°	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
101°	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2
102°	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1
103°	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1
104°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
105°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
106°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
107°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
108°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
109°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
110°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
111°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
112°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
113°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
114°	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1
115°	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2
116°	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1
117°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
118°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
119°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
120°	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
121°	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2
122°	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
123°	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2
124°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2
125°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2
126°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2
127°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2
128°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
129°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
130°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
131°	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
132°	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2
133°	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
134°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3





TEST NUMBER: P284771  
 CATALOG NUMBER: HLB4S06930

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
135°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
136°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
137°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
138°	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
139°	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3
140°	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
141°	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
142°	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
143°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
144°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
145°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
146°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
147°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4
148°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4
149°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4
150°	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4
151°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
152°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
153°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
154°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
155°	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
156°	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
157°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
158°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
159°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
160°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
161°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
162°	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
163°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
164°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
165°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
166°	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.7
167°	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
168°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
169°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
170°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
171°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
172°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
173°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
174°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
175°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
176°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
177°	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
178°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
179°	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7



TEST NUMBER: P284771  
CATALOG NUMBER: HLB4S06930

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
180°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7



TEST NUMBER: P284771  
 CATALOG NUMBER: HLB4S06930

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	247.4	247.4	247.4	247.4	247.4	247.4
1°	247.6	247.1	246.9	246.9	247.2	248.2
2°	247.1	247.1	246.8	247.3	247.3	248.2
3°	246.9	247.1	247.3	247.4	247.5	247.7
4°	246.6	247.0	246.8	246.7	246.2	246.3
5°	246.4	246.8	246.8	245.7	246.2	245.9
6°	246.1	246.9	246.8	245.2	246.2	246.6
7°	245.8	246.8	246.4	244.8	245.6	245.4
8°	245.6	245.5	245.2	245.3	244.5	244.2
9°	245.2	245.4	245.1	245.2	243.4	244.1
10°	244.4	245.0	245.1	244.2	243.0	242.5
11°	244.0	244.2	243.8	243.2	242.9	242.6
12°	243.6	243.5	243.6	242.0	241.9	242.3
13°	243.2	243.4	243.1	241.7	240.8	241.1
14°	242.5	243.5	242.3	241.7	239.8	239.4
15°	242.3	242.8	242.2	240.8	238.4	237.5
16°	241.5	242.8	242.1	238.9	237.5	237.2
17°	240.8	241.3	240.5	237.9	236.3	236.4
18°	239.4	240.0	239.7	237.5	235.1	234.8
19°	237.7	239.6	239.1	236.6	233.5	232.5
20°	237.7	239.3	238.3	234.9	231.6	230.4
21°	236.6	238.6	236.7	232.9	229.9	228.9
22°	234.8	236.9	234.6	231.0	228.5	228.1
23°	232.7	234.9	234.0	229.5	226.7	225.6
24°	231.6	233.8	233.3	228.1	224.7	223.2
25°	230.6	232.8	231.1	226.9	222.7	222.2
26°	228.6	231.2	228.8	225.3	220.5	219.8
27°	226.0	229.7	227.3	222.4	217.7	217.5
28°	224.0	227.8	225.9	220.0	215.3	214.0
29°	222.8	225.7	223.5	218.1	213.3	211.4
30°	221.0	223.6	221.5	216.2	210.9	209.3
31°	218.1	221.3	219.1	213.6	208.4	206.9
32°	215.0	218.4	216.7	210.9	205.5	204.3
33°	212.2	216.0	214.4	208.3	202.3	200.4
34°	209.7	213.6	211.3	205.0	198.7	196.9
35°	207.3	211.5	207.8	202.1	196.4	194.1
36°	204.7	208.8	205.3	199.3	193.7	191.3
37°	201.0	205.1	202.7	196.2	189.7	188.3
38°	197.0	202.0	199.2	192.7	185.7	184.6
39°	194.2	199.0	195.5	188.7	183.1	180.5
40°	190.7	195.1	192.6	185.5	179.9	176.5
41°	186.9	190.5	188.0	182.2	175.3	173.1
42°	183.0	187.2	184.2	178.5	171.4	170.0
43°	179.6	184.1	180.3	174.3	168.0	166.2
44°	175.4	179.5	176.6	170.1	164.7	162.2



TEST NUMBER: P284771  
 CATALOG NUMBER: HLB4S06930

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	171.0	175.1	172.7	166.7	160.3	157.7
46°	167.5	171.3	169.0	163.0	156.2	154.2
47°	162.7	167.6	165.0	158.5	152.3	150.1
48°	158.7	163.0	160.4	154.1	148.3	146.6
49°	154.4	158.1	155.4	150.3	144.1	142.7
50°	149.9	153.5	151.2	145.9	140.2	138.6
51°	145.1	149.5	147.2	141.3	135.9	134.5
52°	140.5	145.2	142.3	137.0	131.5	130.0
53°	135.9	140.3	137.4	132.4	127.5	125.4
54°	131.1	135.4	132.8	128.1	123.7	120.9
55°	126.5	130.8	128.4	123.4	119.5	116.7
56°	122.1	126.0	123.7	118.9	114.9	112.5
57°	117.5	121.5	118.9	114.9	110.7	108.7
58°	113.1	116.9	114.5	110.8	106.8	103.9
59°	108.5	112.5	110.5	106.8	102.4	99.8
60°	104.0	107.9	106.2	102.3	98.3	95.9
61°	99.9	103.1	101.7	98.0	94.3	92.3
62°	96.0	98.9	97.0	93.8	89.8	88.5
63°	91.6	94.3	92.9	89.6	86.0	84.6
64°	87.0	90.0	88.7	85.4	81.8	80.7
65°	82.5	85.1	84.2	81.1	77.9	76.4
66°	78.5	81.0	80.1	77.1	73.8	72.4
67°	74.5	76.6	75.9	73.0	70.0	68.8
68°	70.4	72.3	71.9	68.9	66.2	64.9
69°	66.1	68.0	67.7	64.8	62.2	60.9
70°	62.1	63.8	63.5	60.9	58.4	57.3
71°	58.4	59.8	59.7	57.1	54.7	53.8
72°	54.6	55.9	55.9	53.3	51.0	50.2
73°	50.8	52.1	52.1	49.6	47.4	46.5
74°	47.1	48.5	48.3	46.0	44.1	43.0
75°	43.7	44.8	44.6	42.4	40.6	39.9
76°	40.0	41.3	41.2	39.0	37.4	36.6
77°	36.3	37.8	37.7	35.7	34.2	33.4
78°	32.7	34.3	34.3	32.4	31.0	30.3
79°	29.3	31.0	31.0	29.0	27.9	27.3
80°	26.2	27.7	27.7	26.0	24.7	24.3
81°	23.2	24.5	24.6	23.1	21.9	21.3
82°	20.2	21.4	21.4	20.1	18.9	18.2
83°	17.3	18.3	18.4	17.3	16.0	15.4
84°	14.4	15.4	15.5	14.6	13.2	12.8
85°	11.7	12.5	12.7	12.0	10.6	10.3
86°	9.0	9.8	9.9	9.4	8.3	8.1
87°	6.4	7.0	7.2	6.9	6.2	5.8
88°	3.9	4.4	4.7	4.4	4.1	3.6
89°	2.1	2.4	2.6	2.3	2.1	1.5



TEST NUMBER: P284771  
 CATALOG NUMBER: HLB4S06930

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	1.0	1.2	1.3	1.1	0.8	0.3
91°	0.4	0.3	0.4	0.4	0.4	0.3
92°	0.3	0.3	0.3	0.4	0.4	0.3
93°	0.3	0.3	0.3	0.4	0.3	0.2
94°	0.3	0.3	0.3	0.3	0.3	0.2
95°	0.3	0.3	0.3	0.3	0.2	0.2
96°	0.3	0.2	0.3	0.2	0.2	0.2
97°	0.2	0.2	0.2	0.2	0.2	0.2
98°	0.2	0.2	0.2	0.2	0.2	0.2
99°	0.2	0.2	0.2	0.2	0.2	0.2
100°	0.2	0.2	0.2	0.1	0.2	0.2
101°	0.2	0.2	0.1	0.1	0.1	0.2
102°	0.2	0.2	0.1	0.1	0.1	0.1
103°	0.2	0.2	0.1	0.1	0.1	0.1
104°	0.1	0.1	0.1	0.1	0.1	0.1
105°	0.1	0.1	0.1	0.1	0.1	0.1
106°	0.1	0.1	0.1	0.1	0.1	0.1
107°	0.1	0.1	0.1	0.1	0.1	0.1
108°	0.1	0.1	0.1	0.1	0.1	0.1
109°	0.1	0.1	0.1	0.1	0.1	0.1
110°	0.1	0.1	0.1	0.1	0.1	0.1
111°	0.1	0.1	0.1	0.1	0.1	0.1
112°	0.1	0.1	0.1	0.1	0.1	0.1
113°	0.1	0.1	0.1	0.1	0.1	0.1
114°	0.2	0.1	0.1	0.1	0.1	0.1
115°	0.1	0.1	0.1	0.1	0.1	0.1
116°	0.2	0.1	0.1	0.1	0.1	0.1
117°	0.1	0.1	0.1	0.1	0.1	0.1
118°	0.1	0.1	0.1	0.1	0.1	0.1
119°	0.1	0.1	0.1	0.1	0.1	0.1
120°	0.2	0.2	0.1	0.1	0.1	0.1
121°	0.3	0.2	0.2	0.2	0.2	0.1
122°	0.3	0.3	0.3	0.2	0.2	0.1
123°	0.3	0.2	0.2	0.2	0.2	0.1
124°	0.2	0.2	0.2	0.2	0.2	0.1
125°	0.2	0.2	0.2	0.2	0.2	0.1
126°	0.2	0.2	0.2	0.2	0.2	0.1
127°	0.2	0.2	0.2	0.2	0.2	0.1
128°	0.2	0.2	0.2	0.2	0.2	0.1
129°	0.2	0.2	0.2	0.2	0.2	0.1
130°	0.2	0.2	0.2	0.2	0.2	0.1
131°	0.3	0.3	0.3	0.2	0.2	0.2
132°	0.3	0.2	0.2	0.2	0.2	0.2
133°	0.3	0.3	0.3	0.2	0.2	0.2
134°	0.3	0.3	0.3	0.3	0.2	0.2



TEST NUMBER: P284771  
 CATALOG NUMBER: HLB4S06930

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
135°	0.3	0.3	0.3	0.3	0.3	0.2
136°	0.3	0.3	0.3	0.3	0.3	0.2
137°	0.3	0.3	0.3	0.3	0.3	0.3
138°	0.4	0.4	0.4	0.3	0.3	0.3
139°	0.4	0.4	0.3	0.3	0.3	0.3
140°	0.4	0.4	0.4	0.4	0.3	0.3
141°	0.4	0.3	0.3	0.3	0.3	0.3
142°	0.4	0.4	0.4	0.4	0.4	0.3
143°	0.4	0.4	0.4	0.4	0.4	0.4
144°	0.4	0.4	0.4	0.4	0.4	0.4
145°	0.4	0.4	0.4	0.4	0.4	0.4
146°	0.4	0.4	0.4	0.4	0.4	0.4
147°	0.4	0.4	0.4	0.4	0.4	0.4
148°	0.4	0.4	0.4	0.4	0.4	0.4
149°	0.4	0.4	0.4	0.4	0.4	0.4
150°	0.5	0.4	0.4	0.4	0.4	0.4
151°	0.4	0.4	0.4	0.4	0.4	0.4
152°	0.4	0.4	0.4	0.4	0.4	0.4
153°	0.4	0.4	0.4	0.4	0.4	0.4
154°	0.4	0.4	0.4	0.4	0.4	0.4
155°	0.4	0.4	0.4	0.4	0.4	0.4
156°	0.5	0.5	0.5	0.4	0.4	0.4
157°	0.5	0.5	0.5	0.5	0.5	0.5
158°	0.5	0.5	0.5	0.5	0.5	0.5
159°	0.5	0.5	0.5	0.5	0.5	0.5
160°	0.5	0.5	0.5	0.5	0.5	0.5
161°	0.5	0.5	0.5	0.5	0.5	0.5
162°	0.6	0.6	0.6	0.5	0.5	0.5
163°	0.6	0.6	0.6	0.6	0.6	0.6
164°	0.6	0.6	0.6	0.6	0.6	0.6
165°	0.6	0.6	0.6	0.6	0.6	0.6
166°	0.6	0.6	0.6	0.6	0.6	0.6
167°	0.7	0.7	0.7	0.7	0.6	0.7
168°	0.7	0.7	0.7	0.7	0.7	0.7
169°	0.7	0.7	0.7	0.7	0.7	0.7
170°	0.7	0.7	0.7	0.7	0.7	0.7
171°	0.7	0.7	0.7	0.7	0.7	0.7
172°	0.7	0.7	0.7	0.7	0.7	0.7
173°	0.7	0.7	0.7	0.7	0.7	0.7
174°	0.7	0.7	0.7	0.7	0.7	0.7
175°	0.7	0.7	0.7	0.7	0.7	0.7
176°	0.7	0.7	0.7	0.7	0.7	0.7
177°	0.7	0.7	0.7	0.7	0.7	0.8
178°	0.7	0.7	0.7	0.7	0.7	0.7
179°	0.7	0.7	0.7	0.7	0.7	0.8



TEST NUMBER: P284771  
CATALOG NUMBER: HLB4S06930

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
180°	0.7	0.7	0.7	0.7	0.7	0.7

(END OF REPORT)