

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: P284774

Luminaire Tested: **HLB4S06950**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P284774
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: HLB4S06950
Description: 4 IN SQUARE HALO BLADE (600 LUMEN) - 5000K
Light Source: -
Ballast/Driver: -

Summary

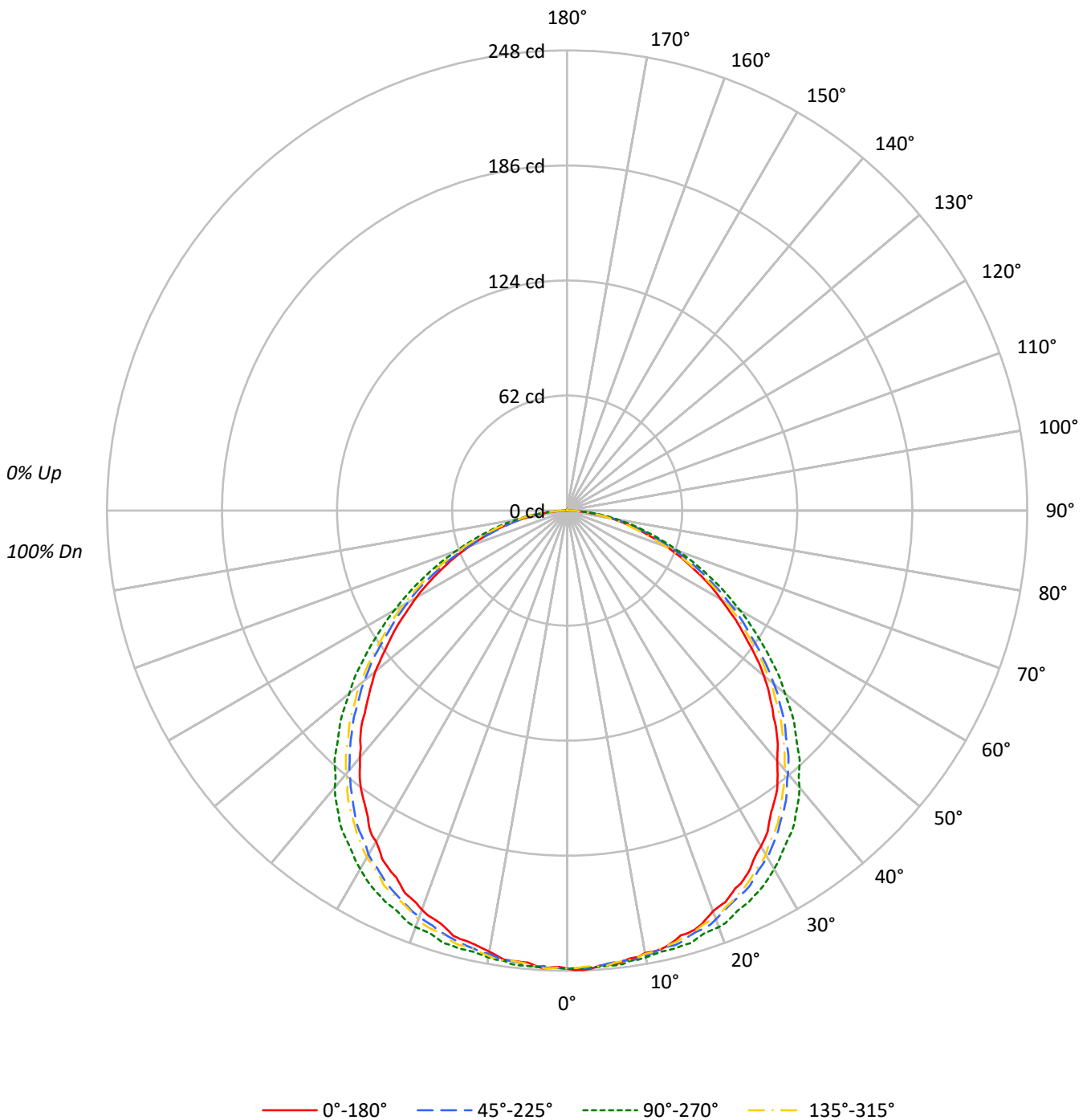
Lumens per Lamp: N/A
Luminaire Lumens: 694.5 lumens
Efficiency: N/A
Efficacy: 68.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.33 / 1.38
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	91	80	72	66	88	78	71	65	75	69	64	73	67	63	70	65	62	59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	30333	30333	30333	30333
5°	30276	30374	30152	30374
10°	30202	30501	30114	30501
15°	30143	30830	30169	30830
20°	30057	31233	29926	31233
25°	30052	31503	29564	31503
30°	29634	31649	29223	31649
35°	29050	31660	28645	31660
40°	28258	31241	27857	31241
45°	27347	30370	26808	30370
50°	26433	29281	25783	29281
55°	24932	27973	24417	27973
60°	23514	26463	23096	26463
65°	22151	24709	21686	24709
70°	20546	22881	20007	22881
75°	18892	21218	18417	21218
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°	67.7	9.7
20°-30°	104.0	15.0
30°-40°	125.6	18.1
40°-50°	127.2	18.3
50°-60°	109.4	15.8
60°-70°	79.1	11.4
70°-80°	43.8	6.3
80°-90°	12.6	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°	195.0	28.1
0°-40°	320.7	46.2
0°-60°	557.3	80.3
0°-90°	692.8	99.8
90°-120°	0.5	0.1
90°-150°	1.2	0.2
90°-180°	2.0	0.3
0°-180°	694.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	247	247	247	247	247	
5°	246	246	244	246	246	23
15°	237	242	237	242	237	67
25°	222	232	218	232	222	102
35°	194	211	191	211	194	121
45°	157	175	154	175	157	122
55°	116	131	114	131	116	104
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°	246.9	246.9	246.9	246.9	246.9	246.9	246.9	246.9	246.9	246.9	246.9
1°	247.7	246.7	246.4	246.4	246.6	247.1	246.7	246.6	245.9	246.6	246.7
2°	247.7	246.8	246.8	246.3	246.6	246.6	246.1	246.7	246.4	246.7	246.1
3°	247.3	247.0	246.9	246.8	246.6	246.4	245.8	245.9	247.1	245.9	245.8
4°	245.9	245.7	246.2	246.4	246.5	246.2	246.3	245.3	245.9	245.3	246.3
5°	245.5	245.7	245.2	246.3	246.3	245.9	246.2	246.0	244.5	246.0	246.2
6°	246.2	245.7	244.8	246.4	246.4	245.6	245.1	245.6	244.5	245.6	245.1
7°	244.9	245.1	244.4	245.9	246.3	245.3	244.6	244.4	244.5	244.4	244.6
8°	243.7	244.1	244.8	244.8	245.0	245.1	244.4	243.6	244.4	243.6	244.4
9°	243.6	242.9	244.8	244.7	245.0	244.8	243.7	242.9	242.8	242.9	243.7
10°	242.1	242.5	243.7	244.6	244.5	243.9	242.5	242.3	241.4	242.3	242.5
11°	242.2	242.5	242.8	243.3	243.8	243.6	242.4	241.7	240.2	241.7	242.4
12°	241.8	241.4	241.5	243.1	243.1	243.1	241.4	240.3	239.1	240.3	241.4
13°	240.7	240.3	241.2	242.6	243.0	242.8	240.7	239.0	238.3	239.0	240.7
14°	239.0	239.4	241.3	241.9	243.1	242.1	239.9	238.5	238.0	238.5	239.9
15°	237.0	238.0	240.3	241.7	242.4	241.9	238.9	237.9	237.2	237.9	238.9
16°	236.8	237.0	238.5	241.7	242.4	241.1	237.8	235.8	234.8	235.8	237.8
17°	236.0	235.8	237.5	240.0	240.8	240.3	236.7	234.1	232.8	234.1	236.7
18°	234.4	234.6	237.1	239.2	239.5	238.9	235.2	232.5	231.6	232.5	235.2
19°	232.1	233.1	236.2	238.6	239.1	237.3	234.1	232.0	230.7	232.0	234.1
20°	229.9	231.2	234.4	237.8	238.9	237.3	233.0	230.6	228.9	230.6	233.0
21°	228.5	229.5	232.4	236.3	238.1	236.1	231.8	228.2	226.6	228.2	231.8
22°	227.6	228.1	230.6	234.2	236.4	234.4	229.9	225.7	225.1	225.7	229.9
23°	225.2	226.2	229.0	233.5	234.5	232.3	228.3	224.0	223.8	224.0	228.3
24°	222.8	224.3	227.6	232.9	233.4	231.2	226.4	222.7	220.9	222.7	226.4
25°	221.7	222.3	226.5	230.7	232.4	230.1	224.8	220.4	218.1	220.4	224.8
26°	219.4	220.0	224.9	228.4	230.7	228.2	222.8	217.2	216.6	217.2	222.8
27°	217.1	217.2	222.0	226.8	229.3	225.6	220.5	215.7	214.5	215.7	220.5
28°	213.6	214.9	219.6	225.5	227.4	223.6	218.1	213.3	212.5	213.3	218.1
29°	211.0	212.9	217.7	223.1	225.3	222.4	216.4	210.3	208.8	210.3	216.4
30°	208.9	210.5	215.8	221.1	223.1	220.6	214.1	208.0	206.0	208.0	214.1
31°	206.5	208.0	213.2	218.7	220.9	217.7	210.6	205.4	204.3	205.4	210.6
32°	203.9	205.2	210.5	216.3	218.0	214.6	208.0	201.8	201.4	201.8	208.0
33°	200.0	201.9	207.9	214.0	215.5	211.8	205.8	198.7	197.2	198.7	205.8
34°	196.5	198.4	204.6	210.9	213.2	209.4	203.1	196.2	193.9	196.2	203.1
35°	193.7	196.1	201.7	207.4	211.1	206.9	199.5	193.2	191.0	193.2	199.5
36°	191.0	193.4	198.9	204.9	208.4	204.3	196.1	189.8	188.2	189.8	196.1
37°	188.0	189.4	195.9	202.3	204.7	200.6	192.6	186.6	185.2	186.6	192.6
38°	184.2	185.4	192.3	198.8	201.6	196.7	189.4	183.5	181.6	183.5	189.4
39°	180.2	182.7	188.3	195.1	198.6	193.8	185.9	179.8	177.4	179.8	185.9
40°	176.2	179.6	185.2	192.2	194.8	190.3	182.7	175.7	173.7	175.7	182.7
41°	172.8	175.0	181.8	187.6	190.2	186.6	178.7	171.7	169.6	171.7	178.7
42°	169.7	171.1	178.2	183.8	186.9	182.7	175.1	167.8	166.6	167.8	175.1
43°	165.8	167.7	174.0	180.0	183.8	179.3	171.2	164.7	163.2	164.7	171.2
44°	161.9	164.4	169.8	176.3	179.2	175.1	167.2	160.8	159.1	160.8	167.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	157.4	160.0	166.4	172.4	174.8	170.7	163.5	156.5	154.3	156.5	163.5
46°	153.9	155.9	162.7	168.7	170.9	167.2	159.6	152.6	150.3	152.6	159.6
47°	149.8	152.1	158.2	164.7	167.2	162.4	154.9	149.0	146.3	149.0	154.9
48°	146.3	148.0	153.8	160.1	162.7	158.4	150.9	144.9	142.4	144.9	150.9
49°	142.5	143.9	150.1	155.2	157.8	154.1	147.0	140.5	138.6	140.5	147.0
50°	138.3	139.9	145.6	150.9	153.2	149.6	142.6	136.3	134.9	136.3	142.6
51°	134.2	135.7	141.0	146.9	149.3	144.8	138.2	132.5	130.4	132.5	138.2
52°	129.8	131.3	136.8	142.0	145.0	140.3	134.1	128.0	126.0	128.0	134.1
53°	125.2	127.3	132.1	137.2	140.0	135.7	129.7	123.6	121.8	123.6	129.7
54°	120.6	123.4	127.9	132.6	135.2	130.9	124.8	119.4	117.9	119.4	124.8
55°	116.4	119.2	123.1	128.2	130.6	126.2	120.3	115.5	114.0	115.5	120.3
56°	112.3	114.7	118.7	123.5	125.8	121.8	115.9	111.1	110.0	111.1	115.9
57°	108.5	110.5	114.7	118.7	121.2	117.3	111.9	107.2	105.7	107.2	111.9
58°	103.8	106.6	110.6	114.3	116.7	112.9	108.0	103.1	101.4	103.1	108.0
59°	99.6	102.2	106.6	110.3	112.3	108.3	103.4	99.1	97.6	99.1	103.4
60°	95.7	98.1	102.1	106.0	107.7	103.8	99.1	94.8	94.0	94.8	99.1
61°	92.1	94.1	97.9	101.5	102.9	99.7	95.2	91.2	90.3	91.2	95.2
62°	88.3	89.7	93.7	96.8	98.7	95.8	91.3	86.9	86.1	86.9	91.3
63°	84.4	85.8	89.4	92.7	94.2	91.4	86.8	82.4	81.9	82.4	86.8
64°	80.5	81.6	85.2	88.5	89.8	86.9	82.4	78.5	78.4	78.5	82.4
65°	76.2	77.7	81.0	84.1	85.0	82.4	78.2	74.6	74.6	74.6	78.2
66°	72.3	73.7	76.9	79.9	80.8	78.3	73.8	70.4	70.7	70.4	73.8
67°	68.7	69.9	72.9	75.8	76.5	74.4	69.6	66.2	67.0	66.2	69.6
68°	64.8	66.1	68.7	71.8	72.2	70.3	65.3	62.0	63.2	62.0	65.3
69°	60.8	62.1	64.7	67.6	67.9	66.0	60.9	58.1	59.4	58.1	60.9
70°	57.2	58.3	60.8	63.3	63.7	62.0	56.6	54.3	55.7	54.3	56.6
71°	53.7	54.6	57.0	59.6	59.7	58.3	52.4	50.5	52.1	50.5	52.4
72°	50.1	50.9	53.2	55.8	55.7	54.5	48.5	46.8	48.7	46.8	48.5
73°	46.4	47.3	49.6	52.0	52.0	50.7	44.5	43.1	45.6	43.1	44.5
74°	42.9	44.0	45.9	48.2	48.4	47.0	40.9	39.6	42.2	39.6	40.9
75°	39.8	40.6	42.3	44.5	44.7	43.6	37.2	36.3	38.8	36.3	37.2
76°	36.6	37.3	38.9	41.1	41.2	39.9	34.6	33.2	35.6	33.2	34.6
77°	33.3	34.1	35.6	37.6	37.7	36.2	31.6	30.3	32.4	30.3	31.6
78°	30.2	31.0	32.3	34.2	34.2	32.6	28.8	27.4	29.1	27.4	28.8
79°	27.3	27.8	29.0	30.9	30.9	29.2	25.9	24.6	26.0	24.6	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°	21.2	21.8	23.0	24.6	24.5	23.2	20.4	19.2	20.1	19.2	20.4
82°	18.2	18.9	20.1	21.4	21.4	20.2	17.8	16.4	17.2	16.4	17.8
83°	15.4	15.9	17.3	18.4	18.3	17.3	15.3	13.7	14.4	13.7	15.3
84°	12.8	13.1	14.6	15.5	15.3	14.4	12.8	11.1	11.8	11.1	12.8
85°	10.3	10.6	11.9	12.7	12.5	11.7	10.3	8.9	9.5	8.9	10.3
86°	8.0	8.3	9.4	9.9	9.7	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	4.6	4.4	3.9	3.2	2.8	3.2	2.8	3.2
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: P284774
 CATALOG NUMBER: HLB4S06950

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: P284774
CATALOG NUMBER: HLB4S06950

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: P284774
 CATALOG NUMBER: HLB4S06950

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	246.9	246.9	246.9	246.9	246.9	246.9
1°	247.1	246.6	246.4	246.4	246.7	247.7
2°	246.6	246.6	246.3	246.8	246.8	247.7
3°	246.4	246.6	246.8	246.9	247.0	247.3
4°	246.2	246.5	246.4	246.2	245.7	245.9
5°	245.9	246.3	246.3	245.2	245.7	245.5
6°	245.6	246.4	246.4	244.8	245.7	246.2
7°	245.3	246.3	245.9	244.4	245.1	244.9
8°	245.1	245.0	244.8	244.8	244.1	243.7
9°	244.8	245.0	244.7	244.8	242.9	243.6
10°	243.9	244.5	244.6	243.7	242.5	242.1
11°	243.6	243.8	243.3	242.8	242.5	242.2
12°	243.1	243.1	243.1	241.5	241.4	241.8
13°	242.8	243.0	242.6	241.2	240.3	240.7
14°	242.1	243.1	241.9	241.3	239.4	239.0
15°	241.9	242.4	241.7	240.3	238.0	237.0
16°	241.1	242.4	241.7	238.5	237.0	236.8
17°	240.3	240.8	240.0	237.5	235.8	236.0
18°	238.9	239.5	239.2	237.1	234.6	234.4
19°	237.3	239.1	238.6	236.2	233.1	232.1
20°	237.3	238.9	237.8	234.4	231.2	229.9
21°	236.1	238.1	236.3	232.4	229.5	228.5
22°	234.4	236.4	234.2	230.6	228.1	227.6
23°	232.3	234.5	233.5	229.0	226.2	225.2
24°	231.2	233.4	232.9	227.6	224.3	222.8
25°	230.1	232.4	230.7	226.5	222.3	221.7
26°	228.2	230.7	228.4	224.9	220.0	219.4
27°	225.6	229.3	226.8	222.0	217.2	217.1
28°	223.6	227.4	225.5	219.6	214.9	213.6
29°	222.4	225.3	223.1	217.7	212.9	211.0
30°	220.6	223.1	221.1	215.8	210.5	208.9
31°	217.7	220.9	218.7	213.2	208.0	206.5
32°	214.6	218.0	216.3	210.5	205.2	203.9
33°	211.8	215.5	214.0	207.9	201.9	200.0
34°	209.4	213.2	210.9	204.6	198.4	196.5
35°	206.9	211.1	207.4	201.7	196.1	193.7
36°	204.3	208.4	204.9	198.9	193.4	191.0
37°	200.6	204.7	202.3	195.9	189.4	188.0
38°	196.7	201.6	198.8	192.3	185.4	184.2
39°	193.8	198.6	195.1	188.3	182.7	180.2
40°	190.3	194.8	192.2	185.2	179.6	176.2
41°	186.6	190.2	187.6	181.8	175.0	172.8
42°	182.7	186.9	183.8	178.2	171.1	169.7
43°	179.3	183.8	180.0	174.0	167.7	165.8
44°	175.1	179.2	176.3	169.8	164.4	161.9



TEST NUMBER: P284774
 CATALOG NUMBER: HLB4S06950

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	170.7	174.8	172.4	166.4	160.0	157.4
46°	167.2	170.9	168.7	162.7	155.9	153.9
47°	162.4	167.2	164.7	158.2	152.1	149.8
48°	158.4	162.7	160.1	153.8	148.0	146.3
49°	154.1	157.8	155.2	150.1	143.9	142.5
50°	149.6	153.2	150.9	145.6	139.9	138.3
51°	144.8	149.3	146.9	141.0	135.7	134.2
52°	140.3	145.0	142.0	136.8	131.3	129.8
53°	135.7	140.0	137.2	132.1	127.3	125.2
54°	130.9	135.2	132.6	127.9	123.4	120.6
55°	126.2	130.6	128.2	123.1	119.2	116.4
56°	121.8	125.8	123.5	118.7	114.7	112.3
57°	117.3	121.2	118.7	114.7	110.5	108.5
58°	112.9	116.7	114.3	110.6	106.6	103.8
59°	108.3	112.3	110.3	106.6	102.2	99.6
60°	103.8	107.7	106.0	102.1	98.1	95.7
61°	99.7	102.9	101.5	97.9	94.1	92.1
62°	95.8	98.7	96.8	93.7	89.7	88.3
63°	91.4	94.2	92.7	89.4	85.8	84.4
64°	86.9	89.8	88.5	85.2	81.6	80.5
65°	82.4	85.0	84.1	81.0	77.7	76.2
66°	78.3	80.8	79.9	76.9	73.7	72.3
67°	74.4	76.5	75.8	72.9	69.9	68.7
68°	70.3	72.2	71.8	68.7	66.1	64.8
69°	66.0	67.9	67.6	64.7	62.1	60.8
70°	62.0	63.7	63.3	60.8	58.3	57.2
71°	58.3	59.7	59.6	57.0	54.6	53.7
72°	54.5	55.7	55.8	53.2	50.9	50.1
73°	50.7	52.0	52.0	49.6	47.3	46.4
74°	47.0	48.4	48.2	45.9	44.0	42.9
75°	43.6	44.7	44.5	42.3	40.6	39.8
76°	39.9	41.2	41.1	38.9	37.3	36.6
77°	36.2	37.7	37.6	35.6	34.1	33.3
78°	32.6	34.2	34.2	32.3	31.0	30.2
79°	29.2	30.9	30.9	29.0	27.8	27.3
80°	26.2	27.7	27.7	26.0	24.7	24.3
81°	23.2	24.5	24.6	23.0	21.8	21.2
82°	20.2	21.4	21.4	20.1	18.9	18.2
83°	17.3	18.3	18.4	17.3	15.9	15.4
84°	14.4	15.3	15.5	14.6	13.1	12.8
85°	11.7	12.5	12.7	11.9	10.6	10.3
86°	9.0	9.7	9.9	9.4	8.3	8.0
87°	6.4	7.0	7.2	6.9	6.2	5.8
88°	3.9	4.4	4.6	4.4	4.1	3.6
89°	2.1	2.4	2.6	2.3	2.1	1.5



TEST NUMBER: P284774
 CATALOG NUMBER: HLB4S06950

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: P284774
 CATALOG NUMBER: HLB4S06950

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: P284774
CATALOG NUMBER: HLB4S06950

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)