

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: P284773

Luminaire Tested: **HLB4S06940**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P284773
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: HLB4S06940
Description: 4 IN SQUARE HALO BLADE (600 LUMEN) - 4000K
Light Source: -
Ballast/Driver: -

Summary

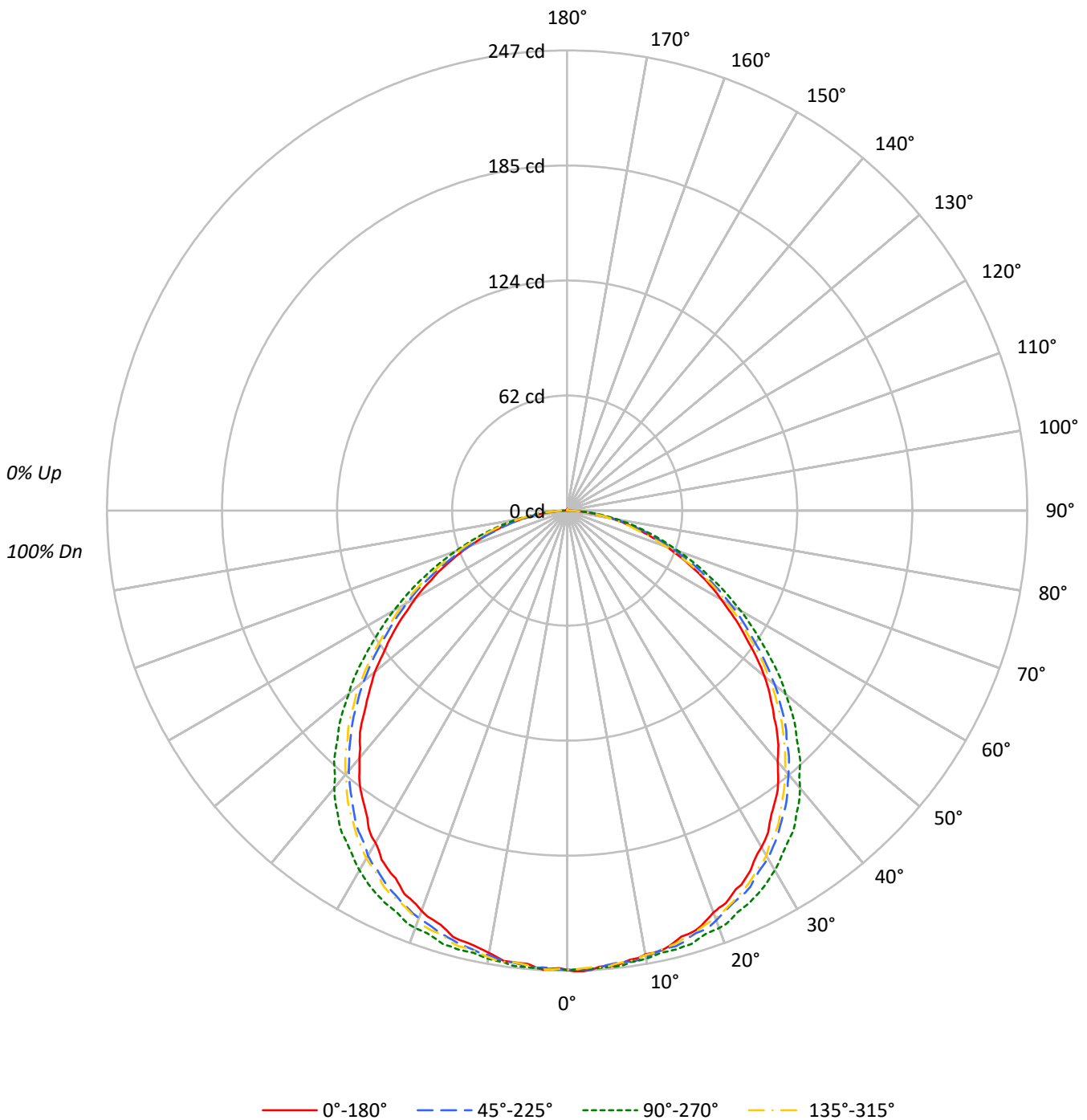
Lumens per Lamp: N/A
Luminaire Lumens: 693.6 lumens
Efficiency: N/A
Efficacy: 68.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.33 / 1.38
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	30296	30296	30296	30296
5°	30239	30337	30115	30337
10°	30164	30464	30077	30464
15°	30105	30792	30118	30792
20°	30017	31181	29887	31181
25°	30025	31462	29524	31462
30°	29592	31620	29195	31620
35°	29020	31630	28600	31630
40°	28210	31193	27809	31193
45°	27312	30318	26773	30318
50°	26414	29242	25764	29242
55°	24910	27930	24396	27930
60°	23490	26413	23072	26413
65°	22151	24651	21657	24651
70°	20510	22845	20007	22845
75°	18892	21170	18370	21170
80°	17121	19527	16343	19527
85°	14519	17479	13391	17479



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.4	3.4
10°-20°	67.6	9.7
20°-30°	103.8	15.0
30°-40°	125.4	18.1
40°-50°	127.1	18.3
50°-60°	109.3	15.8
60°-70°	79.0	11.4
70°-80°	43.7	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°	194.8	28.1
0°-40°	320.2	46.2
0°-60°	556.6	80.2
0°-90°	691.9	99.8
90°-120°	0.5	0.1
90°-150°	1.2	0.2
90°-180°	2.0	0.3
0°-180°	693.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	247	247	247	247	247	
5°	245	246	244	246	245	23
15°	237	242	237	242	237	67
25°	222	232	218	232	222	102
35°	194	211	191	211	194	121
45°	157	174	154	174	157	122
55°	116	130	114	130	116	104
65°	76	85	74	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°	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6	246.6
1°	247.4	246.4	246.1	246.1	246.3	246.8	246.4	246.3	245.6	246.3	246.4
2°	247.4	246.5	246.5	246.0	246.3	246.3	245.8	246.4	246.1	246.4	245.8
3°	246.9	246.7	246.6	246.5	246.3	246.1	245.5	245.5	246.8	245.5	245.5
4°	245.5	245.4	245.9	246.1	246.2	245.8	246.0	245.0	245.6	245.0	246.0
5°	245.2	245.4	244.9	246.0	246.0	245.6	245.9	245.7	244.2	245.7	245.9
6°	245.8	245.4	244.4	246.1	246.1	245.3	244.8	245.2	244.2	245.2	244.8
7°	244.6	244.8	244.1	245.6	246.0	245.0	244.3	244.1	244.2	244.1	244.3
8°	243.4	243.8	244.5	244.4	244.7	244.8	244.1	243.3	244.1	243.3	244.1
9°	243.3	242.6	244.4	244.4	244.7	244.4	243.4	242.6	242.5	242.6	243.4
10°	241.8	242.2	243.4	244.3	244.2	243.6	242.2	242.0	241.1	242.0	242.2
11°	241.9	242.2	242.4	243.0	243.5	243.3	242.1	241.4	239.9	241.4	242.1
12°	241.5	241.1	241.2	242.8	242.7	242.8	241.1	239.9	238.8	239.9	241.1
13°	240.4	240.0	240.9	242.3	242.7	242.4	240.4	238.7	238.0	238.7	240.4
14°	238.7	239.1	241.0	241.6	242.7	241.8	239.6	238.2	237.7	238.2	239.6
15°	236.7	237.7	240.0	241.4	242.1	241.6	238.5	237.6	236.8	237.6	238.5
16°	236.5	236.7	238.2	241.3	242.1	240.8	237.5	235.5	234.5	235.5	237.5
17°	235.7	235.5	237.1	239.7	240.5	240.0	236.4	233.8	232.5	233.8	236.4
18°	234.0	234.3	236.8	238.9	239.2	238.6	234.9	232.2	231.3	232.2	234.9
19°	231.8	232.8	235.9	238.3	238.8	237.0	233.8	231.7	230.4	231.7	233.8
20°	229.6	230.9	234.1	237.5	238.5	237.0	232.7	230.3	228.6	230.3	232.7
21°	228.2	229.2	232.1	236.0	237.8	235.8	231.5	227.9	226.3	227.9	231.5
22°	227.3	227.8	230.3	233.9	236.1	234.0	229.6	225.4	224.8	225.4	229.6
23°	224.9	225.9	228.7	233.2	234.2	232.0	228.0	223.7	223.5	223.7	228.0
24°	222.5	224.0	227.3	232.6	233.1	230.9	226.1	222.4	220.6	222.4	226.1
25°	221.5	222.0	226.2	230.4	232.1	229.9	224.5	220.1	217.8	220.1	224.5
26°	219.1	219.8	224.6	228.1	230.4	227.9	222.5	216.9	216.3	216.9	222.5
27°	216.8	217.0	221.7	226.5	229.0	225.3	220.2	215.4	214.2	215.4	220.2
28°	213.4	214.6	219.3	225.2	227.1	223.3	217.8	213.0	212.2	213.0	217.8
29°	210.7	212.6	217.4	222.8	225.0	222.1	216.2	210.0	208.5	210.0	216.2
30°	208.6	210.2	215.6	220.8	222.9	220.4	213.9	207.7	205.8	207.7	213.9
31°	206.2	207.8	212.9	218.4	220.6	217.4	210.3	205.2	204.0	205.2	210.3
32°	203.6	204.9	210.3	216.0	217.7	214.3	207.7	201.5	201.1	201.5	207.7
33°	199.7	201.6	207.6	213.7	215.3	211.5	205.5	198.4	196.9	198.4	205.5
34°	196.3	198.1	204.4	210.6	212.9	209.1	202.8	195.9	193.6	195.9	202.8
35°	193.5	195.8	201.4	207.2	210.9	206.7	199.2	193.0	190.7	193.0	199.2
36°	190.7	193.1	198.6	204.7	208.1	204.1	195.8	189.6	187.9	189.6	195.8
37°	187.7	189.1	195.6	202.1	204.4	200.3	192.4	186.4	184.9	186.4	192.4
38°	184.0	185.1	192.1	198.6	201.4	196.4	189.2	183.2	181.3	183.2	189.2
39°	179.9	182.5	188.1	194.9	198.3	193.5	185.7	179.6	177.1	179.6	185.7
40°	175.9	179.3	184.9	192.0	194.5	190.1	182.4	175.4	173.4	175.4	182.4
41°	172.6	174.8	181.6	187.4	189.9	186.3	178.4	171.4	169.4	171.4	178.4
42°	169.5	170.9	177.9	183.6	186.6	182.4	174.8	167.6	166.4	167.6	174.8
43°	165.6	167.5	173.7	179.8	183.5	179.0	171.0	164.5	163.0	164.5	171.0
44°	161.7	164.2	169.5	176.1	179.0	174.8	167.0	160.5	158.9	160.5	167.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	157.2	159.8	166.2	172.2	174.5	170.5	163.3	156.3	154.1	156.3	163.3
46°	153.7	155.7	162.5	168.5	170.7	167.0	159.4	152.4	150.1	152.4	159.4
47°	149.6	151.9	158.0	164.5	167.0	162.2	154.7	148.8	146.1	148.8	154.7
48°	146.1	147.8	153.6	159.9	162.5	158.2	150.7	144.7	142.2	144.7	150.7
49°	142.3	143.7	149.9	155.0	157.6	153.9	146.9	140.3	138.4	140.3	146.9
50°	138.2	139.7	145.5	150.7	153.0	149.4	142.4	136.1	134.8	136.1	142.4
51°	134.0	135.5	140.8	146.7	149.1	144.6	138.0	132.3	130.2	132.3	138.0
52°	129.6	131.1	136.6	141.8	144.8	140.1	134.0	127.9	125.8	127.9	134.0
53°	125.1	127.1	132.0	137.0	139.9	135.5	129.5	123.4	121.7	123.4	129.5
54°	120.5	123.3	127.7	132.4	135.0	130.7	124.7	119.2	117.8	119.2	124.7
55°	116.3	119.1	123.0	128.0	130.4	126.1	120.1	115.3	113.9	115.3	120.1
56°	112.2	114.5	118.5	123.4	125.6	121.7	115.8	110.9	109.9	110.9	115.8
57°	108.3	110.4	114.5	118.5	121.1	117.2	111.8	107.1	105.6	107.1	111.8
58°	103.6	106.5	110.5	114.2	116.5	112.8	107.9	103.0	101.3	103.0	107.9
59°	99.5	102.1	106.4	110.2	112.2	108.2	103.3	99.0	97.5	99.0	103.3
60°	95.6	98.0	101.9	105.9	107.5	103.7	99.0	94.6	93.9	94.6	99.0
61°	92.0	94.0	97.7	101.3	102.8	99.6	95.1	91.1	90.1	91.1	95.1
62°	88.2	89.6	93.5	96.7	98.5	95.7	91.2	86.8	85.9	86.8	91.2
63°	84.3	85.7	89.3	92.6	94.0	91.3	86.7	82.3	81.7	82.3	86.7
64°	80.4	81.5	85.1	88.4	89.7	86.8	82.3	78.4	78.3	78.4	82.3
65°	76.2	77.6	80.9	84.0	84.8	82.3	78.1	74.5	74.5	74.5	78.1
66°	72.2	73.6	76.8	79.8	80.7	78.2	73.7	70.3	70.6	70.3	73.7
67°	68.6	69.8	72.8	75.7	76.4	74.3	69.5	66.1	66.9	66.1	69.5
68°	64.7	66.0	68.6	71.7	72.1	70.2	65.2	61.9	63.1	61.9	65.2
69°	60.7	62.0	64.6	67.5	67.8	65.9	60.8	58.0	59.4	58.0	60.8
70°	57.1	58.2	60.7	63.3	63.6	61.9	56.6	54.2	55.7	54.2	56.6
71°	53.6	54.6	56.9	59.5	59.6	58.3	52.4	50.4	52.0	50.4	52.4
72°	50.0	50.8	53.2	55.8	55.7	54.4	48.5	46.7	48.7	46.7	48.5
73°	46.3	47.3	49.5	51.9	51.9	50.7	44.5	43.1	45.5	43.1	44.5
74°	42.9	44.0	45.9	48.2	48.3	47.0	40.8	39.5	42.1	39.5	40.8
75°	39.8	40.5	42.3	44.5	44.6	43.5	37.2	36.2	38.7	36.2	37.2
76°	36.5	37.3	38.9	41.0	41.2	39.8	34.5	33.1	35.6	33.1	34.5
77°	33.3	34.1	35.6	37.6	37.6	36.2	31.5	30.3	32.3	30.3	31.5
78°	30.2	30.9	32.3	34.2	34.2	32.6	28.7	27.4	29.1	27.4	28.7
79°	27.2	27.8	28.9	30.9	30.9	29.2	25.8	24.6	26.0	24.6	25.8
80°	24.2	24.7	25.9	27.6	27.6	26.1	23.1	21.9	23.1	21.9	23.1
81°	21.2	21.8	23.0	24.5	24.5	23.1	20.4	19.1	20.1	19.1	20.4
82°	18.2	18.9	20.0	21.4	21.4	20.2	17.8	16.4	17.2	16.4	17.8
83°	15.4	15.9	17.2	18.3	18.3	17.2	15.3	13.7	14.4	13.7	15.3
84°	12.7	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	12.4	11.6	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	6.8	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	4.3	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: P284773
 CATALOG NUMBER: HLB4S06940

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: P284773
CATALOG NUMBER: HLB4S06940

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: P284773
 CATALOG NUMBER: HLB4S06940

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	246.6	246.6	246.6	246.6	246.6	246.6
1°	246.8	246.3	246.1	246.1	246.4	247.4
2°	246.3	246.3	246.0	246.5	246.5	247.4
3°	246.1	246.3	246.5	246.6	246.7	246.9
4°	245.8	246.2	246.1	245.9	245.4	245.5
5°	245.6	246.0	246.0	244.9	245.4	245.2
6°	245.3	246.1	246.1	244.4	245.4	245.8
7°	245.0	246.0	245.6	244.1	244.8	244.6
8°	244.8	244.7	244.4	244.5	243.8	243.4
9°	244.4	244.7	244.4	244.4	242.6	243.3
10°	243.6	244.2	244.3	243.4	242.2	241.8
11°	243.3	243.5	243.0	242.4	242.2	241.9
12°	242.8	242.7	242.8	241.2	241.1	241.5
13°	242.4	242.7	242.3	240.9	240.0	240.4
14°	241.8	242.7	241.6	241.0	239.1	238.7
15°	241.6	242.1	241.4	240.0	237.7	236.7
16°	240.8	242.1	241.3	238.2	236.7	236.5
17°	240.0	240.5	239.7	237.1	235.5	235.7
18°	238.6	239.2	238.9	236.8	234.3	234.0
19°	237.0	238.8	238.3	235.9	232.8	231.8
20°	237.0	238.5	237.5	234.1	230.9	229.6
21°	235.8	237.8	236.0	232.1	229.2	228.2
22°	234.0	236.1	233.9	230.3	227.8	227.3
23°	232.0	234.2	233.2	228.7	225.9	224.9
24°	230.9	233.1	232.6	227.3	224.0	222.5
25°	229.9	232.1	230.4	226.2	222.0	221.5
26°	227.9	230.4	228.1	224.6	219.8	219.1
27°	225.3	229.0	226.5	221.7	217.0	216.8
28°	223.3	227.1	225.2	219.3	214.6	213.4
29°	222.1	225.0	222.8	217.4	212.6	210.7
30°	220.4	222.9	220.8	215.6	210.2	208.6
31°	217.4	220.6	218.4	212.9	207.8	206.2
32°	214.3	217.7	216.0	210.3	204.9	203.6
33°	211.5	215.3	213.7	207.6	201.6	199.7
34°	209.1	212.9	210.6	204.4	198.1	196.3
35°	206.7	210.9	207.2	201.4	195.8	193.5
36°	204.1	208.1	204.7	198.6	193.1	190.7
37°	200.3	204.4	202.1	195.6	189.1	187.7
38°	196.4	201.4	198.6	192.1	185.1	184.0
39°	193.5	198.3	194.9	188.1	182.5	179.9
40°	190.1	194.5	192.0	184.9	179.3	175.9
41°	186.3	189.9	187.4	181.6	174.8	172.6
42°	182.4	186.6	183.6	177.9	170.9	169.5
43°	179.0	183.5	179.8	173.7	167.5	165.6
44°	174.8	179.0	176.1	169.5	164.2	161.7



TEST NUMBER: P284773
 CATALOG NUMBER: HLB4S06940

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	170.5	174.5	172.2	166.2	159.8	157.2
46°	167.0	170.7	168.5	162.5	155.7	153.7
47°	162.2	167.0	164.5	158.0	151.9	149.6
48°	158.2	162.5	159.9	153.6	147.8	146.1
49°	153.9	157.6	155.0	149.9	143.7	142.3
50°	149.4	153.0	150.7	145.5	139.7	138.2
51°	144.6	149.1	146.7	140.8	135.5	134.0
52°	140.1	144.8	141.8	136.6	131.1	129.6
53°	135.5	139.9	137.0	132.0	127.1	125.1
54°	130.7	135.0	132.4	127.7	123.3	120.5
55°	126.1	130.4	128.0	123.0	119.1	116.3
56°	121.7	125.6	123.4	118.5	114.5	112.2
57°	117.2	121.1	118.5	114.5	110.4	108.3
58°	112.8	116.5	114.2	110.5	106.5	103.6
59°	108.2	112.2	110.2	106.4	102.1	99.5
60°	103.7	107.5	105.9	101.9	98.0	95.6
61°	99.6	102.8	101.3	97.7	94.0	92.0
62°	95.7	98.5	96.7	93.5	89.6	88.2
63°	91.3	94.0	92.6	89.3	85.7	84.3
64°	86.8	89.7	88.4	85.1	81.5	80.4
65°	82.3	84.8	84.0	80.9	77.6	76.2
66°	78.2	80.7	79.8	76.8	73.6	72.2
67°	74.3	76.4	75.7	72.8	69.8	68.6
68°	70.2	72.1	71.7	68.6	66.0	64.7
69°	65.9	67.8	67.5	64.6	62.0	60.7
70°	61.9	63.6	63.3	60.7	58.2	57.1
71°	58.3	59.6	59.5	56.9	54.6	53.6
72°	54.4	55.7	55.8	53.2	50.8	50.0
73°	50.7	51.9	51.9	49.5	47.3	46.3
74°	47.0	48.3	48.2	45.9	44.0	42.9
75°	43.5	44.6	44.5	42.3	40.5	39.8
76°	39.8	41.2	41.0	38.9	37.3	36.5
77°	36.2	37.6	37.6	35.6	34.1	33.3
78°	32.6	34.2	34.2	32.3	30.9	30.2
79°	29.2	30.9	30.9	28.9	27.8	27.2
80°	26.1	27.6	27.6	25.9	24.7	24.2
81°	23.1	24.5	24.5	23.0	21.8	21.2
82°	20.2	21.4	21.4	20.0	18.9	18.2
83°	17.2	18.3	18.3	17.2	15.9	15.4
84°	14.4	15.3	15.5	14.6	13.1	12.7
85°	11.6	12.4	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	6.8	6.2	5.8
88°	3.9	4.3	4.6	4.4	4.1	3.6
89°	2.1	2.4	2.6	2.3	2.1	1.5



TEST NUMBER: P284773
 CATALOG NUMBER: HLB4S06940

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: P284773
 CATALOG NUMBER: HLB4S06940

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: P284773
CATALOG NUMBER: HLB4S06940

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)