

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 COMMERCIAL

Report Number: P583505

Luminaire Tested: **HC805D010-HM80520927-81WWBB**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583505  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC805D010-HM80520927-81WWBB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 479.9 lumens  
Efficiency: N/A  
Efficacy: 80.0 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.07 / 1.16  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

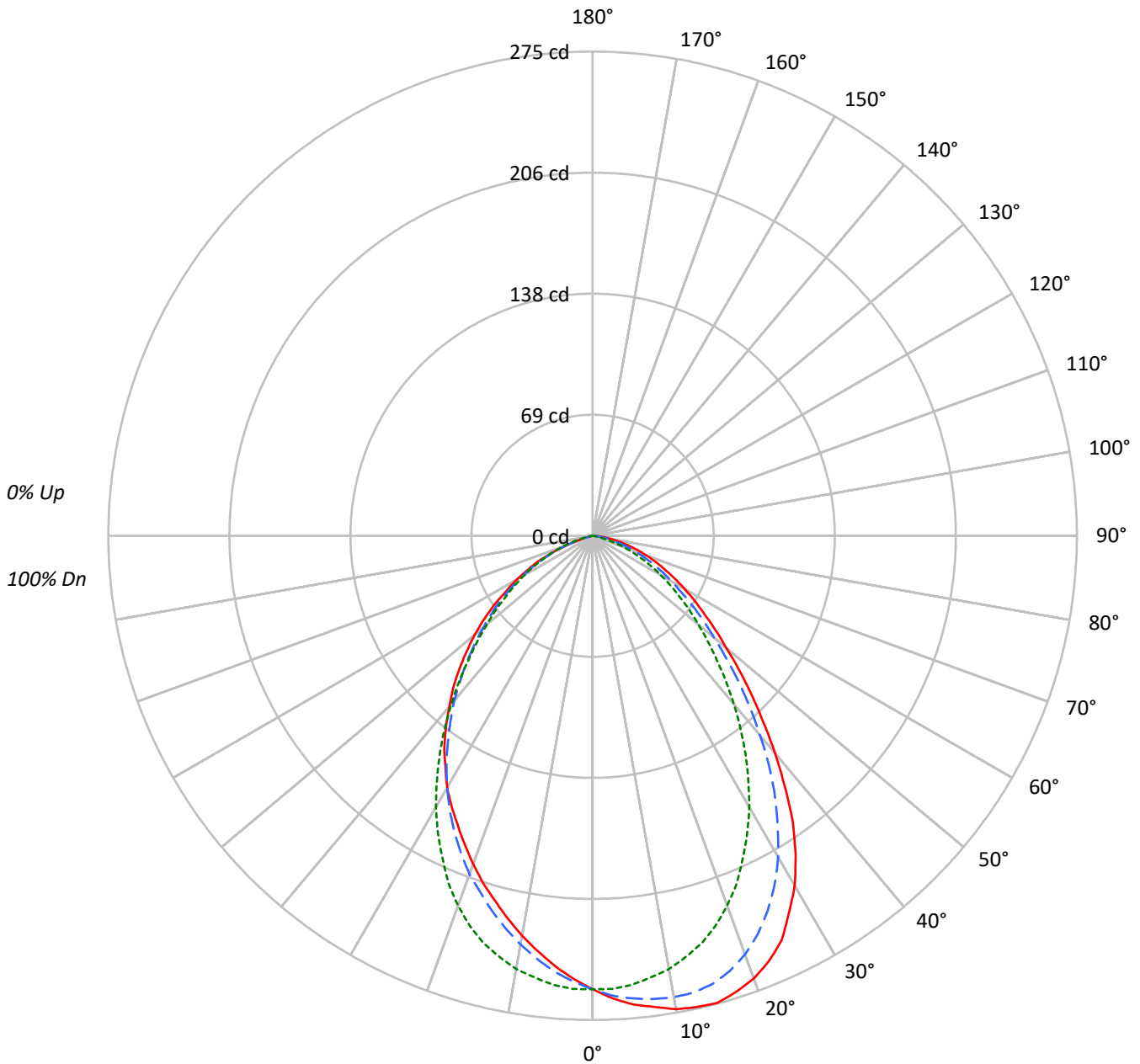
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77			77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67			67
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59			59
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53			53
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47			47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43			43
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39			39
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35			35
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32			32

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

	0°	90°	180°
0°	7943	7943	7943
5°	8274	7924	7593
10°	8548	7825	7224
15°	8766	7646	6848
20°	8781	7331	6507
25°	8635	6866	6169
30°	8172	6334	5882
35°	7454	5696	5526
40°	6481	5020	5096
45°	5560	4348	4666
50°	4749	3751	4193
55°	4161	3231	3645
60°	3707	2751	3065
65°	3283	2247	2444
70°	2912	1659	1388
75°	2442	870	417
80°	1918	284	71
85°	1344	142	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.3	5.1
10°-20°	68.0	14.2
20°-30°	96.3	20.1
30°-40°	100.8	21.0
40°-50°	84.0	17.5
50°-60°	59.6	12.4
60°-70°	34.3	7.2
70°-80°	11.1	2.3
80°-90°	1.5	0.3
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°	188.6	39.3
0°-40°	289.4	60.3
0°-60°	433.0	90.2
0°-90°	479.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	479.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	258	258	258	258	258	
5°	267	264	256	248	245	26
15°	275	264	240	221	214	77
25°	254	235	202	186	181	116
35°	198	181	151	143	147	123
45°	128	117	100	101	107	99
55°	77	69	60	63	68	70
65°	45	38	31	31	34	45
75°	20	15	7	4	4	22
85°	4	2	0	0	0	5
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°	257.6	257.6	257.6	257.6	257.6	257.6	257.6	257.6	257.6	257.6	257.6
2.5°	263.0	262.6	262.3	262.6	262.3	262.6	262.3	262.3	261.9	261.5	261.5
5°	267.3	266.9	266.9	266.9	266.5	266.1	266.1	265.7	264.9	264.5	263.8
7.5°	269.9	270.4	270.4	270.4	269.6	269.6	268.8	268.0	267.3	266.5	265.4
10°	273.0	273.0	272.7	272.3	271.5	271.1	270.8	269.9	268.8	267.3	266.1
12.5°	274.2	274.2	273.8	273.0	272.7	272.3	271.8	270.8	269.2	267.3	265.7
15°	274.6	273.8	273.4	273.0	272.3	271.1	271.1	269.6	267.6	265.4	263.5
17.5°	271.5	271.8	271.1	270.4	269.2	268.4	267.3	266.1	263.8	261.1	259.2
20°	267.6	267.3	266.9	265.7	264.2	263.8	262.6	260.7	258.8	255.7	253.0
22.5°	261.5	261.1	260.3	259.5	258.1	257.2	256.0	253.8	251.1	248.0	244.9
25°	253.8	253.0	251.8	250.3	249.2	248.4	246.8	244.5	241.4	238.0	235.0
27.5°	241.4	242.6	241.8	239.5	238.3	236.9	236.4	233.4	230.7	227.2	223.7
30°	229.5	229.5	228.4	227.2	225.3	224.1	222.6	220.2	217.6	213.3	210.7
32.5°	214.5	214.1	212.6	212.2	210.7	208.4	207.9	204.9	202.2	199.1	195.6
35°	198.0	197.1	195.6	194.5	193.7	192.6	191.4	188.6	186.0	182.9	180.6
37.5°	179.1	179.1	178.7	176.8	176.0	175.2	174.0	171.4	169.9	166.7	164.5
40°	161.0	160.6	159.4	159.1	158.2	157.2	156.3	154.8	152.5	150.2	147.8
42.5°	143.3	143.6	142.1	142.4	141.0	140.2	139.8	137.5	136.3	134.1	132.1
45°	127.5	127.1	126.3	125.9	125.2	124.4	123.7	122.5	120.5	118.3	117.1
47.5°	112.9	111.7	111.7	111.3	111.0	109.4	108.9	107.8	106.7	104.4	102.8
50°	99.0	99.0	99.0	98.6	97.4	97.1	96.2	95.2	94.0	92.4	90.1
52.5°	87.9	87.9	87.9	87.4	85.8	85.5	85.1	83.6	82.0	80.9	79.4
55°	77.4	77.8	77.4	76.6	75.5	75.5	74.3	73.5	72.1	70.9	69.3
57.5°	68.6	68.6	67.8	67.4	66.7	66.2	65.5	64.8	62.7	61.6	59.7
60°	60.1	59.7	59.7	58.9	58.2	57.3	57.0	55.9	55.1	53.1	51.6
62.5°	52.4	52.4	51.6	51.6	50.0	50.0	49.7	48.5	47.4	45.5	44.6
65°	45.0	45.0	44.6	44.3	43.1	42.7	42.4	41.2	40.1	38.9	37.7
67.5°	38.5	38.5	37.7	37.3	36.6	36.1	35.4	34.7	33.5	32.3	31.2
70°	32.3	32.0	31.6	31.2	30.4	30.0	29.3	28.5	27.3	26.6	25.4
72.5°	26.2	26.2	25.9	25.0	24.7	24.3	23.8	23.1	21.9	20.8	20.0
75°	20.5	20.5	20.5	19.6	18.9	18.4	18.4	17.7	17.0	15.8	15.0
77.5°	15.8	15.4	15.0	15.0	14.2	13.9	13.5	13.0	12.0	11.6	10.8
80°	10.8	11.1	10.8	10.4	10.1	9.6	9.6	8.9	8.5	7.7	6.9
82.5°	7.3	6.9	6.9	6.6	6.6	6.1	6.1	5.4	5.0	4.7	4.2
85°	3.8	3.8	3.5	3.5	3.5	3.1	3.1	2.8	2.8	2.3	1.9
87.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.7	0.7	0.7
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°	257.6	257.6	257.6	257.6	257.6	257.6	257.6	257.6	257.6	257.6	257.6
2.5°	261.1	260.3	260.0	260.0	259.5	259.2	258.8	258.4	257.6	257.6	256.9
5°	263.0	262.3	261.9	260.7	260.0	260.0	258.4	258.1	256.9	256.0	255.3
7.5°	264.5	263.0	261.9	260.7	260.0	259.2	257.6	256.0	254.6	253.0	252.2
10°	264.5	263.0	261.1	259.2	258.4	257.6	255.7	253.4	251.5	249.9	248.0
12.5°	263.8	261.5	259.2	257.6	256.0	255.0	252.7	250.3	248.0	244.9	243.4
15°	261.5	258.4	256.0	253.4	252.2	250.3	248.4	244.9	242.3	239.5	237.6
17.5°	256.9	253.0	250.3	247.7	245.7	244.5	241.4	238.3	235.3	232.2	229.9
20°	249.9	246.5	243.4	239.9	238.3	236.9	232.9	229.9	226.8	223.4	221.1
22.5°	241.4	238.0	233.8	231.0	228.7	226.8	223.4	219.9	216.8	213.8	210.7
25°	231.0	227.5	223.7	219.5	218.0	216.1	212.2	208.8	205.3	201.8	199.1
27.5°	219.9	215.2	212.2	207.6	206.0	204.1	199.9	196.1	193.0	190.2	187.2
30°	206.4	202.9	198.7	194.5	193.0	191.0	187.6	184.1	181.0	177.9	174.9
32.5°	191.8	188.3	184.1	181.0	178.7	177.2	173.7	170.6	167.6	164.5	161.7
35°	176.4	172.5	169.5	166.4	164.5	162.6	159.1	156.3	154.1	151.3	148.7
37.5°	160.6	157.9	154.8	151.3	149.4	147.8	145.2	142.1	140.2	137.9	136.0
40°	145.2	142.1	139.5	136.3	134.8	133.6	131.0	128.7	126.6	124.7	123.7
42.5°	129.4	126.6	124.0	122.1	120.9	119.8	117.8	115.2	114.0	112.0	111.0
45°	114.8	112.4	110.5	107.8	107.0	106.3	104.0	102.1	100.9	99.7	99.0
47.5°	100.9	99.4	97.1	95.5	94.3	93.6	92.0	90.5	89.3	88.6	87.9
50°	88.9	87.0	85.5	83.9	83.2	82.0	80.4	79.7	79.0	78.2	78.2
52.5°	77.8	75.9	74.3	73.1	72.4	71.6	70.5	70.1	69.3	69.3	68.9
55°	67.4	66.2	64.8	63.2	62.7	62.4	61.6	60.8	60.4	60.1	60.4
57.5°	58.5	57.3	55.9	54.7	54.3	53.9	53.5	52.8	52.4	52.4	52.4
60°	50.4	49.3	48.1	47.0	47.0	46.2	45.8	45.5	45.0	44.6	44.6
62.5°	43.1	42.0	40.8	40.1	39.6	39.3	38.5	38.2	37.7	37.7	37.3
65°	36.6	35.1	34.7	33.5	33.2	32.7	32.3	31.6	31.2	30.8	30.4
67.5°	30.0	29.3	28.1	27.3	26.9	26.6	26.2	25.4	25.0	24.7	23.8
70°	24.3	23.5	22.7	21.9	21.5	21.2	20.5	19.6	19.3	18.4	17.4
72.5°	18.9	18.1	17.4	16.5	16.2	15.8	15.0	14.2	13.5	12.7	12.0
75°	14.2	13.5	12.3	11.6	11.1	11.1	10.1	9.2	8.5	7.3	6.6
77.5°	10.1	8.9	8.5	7.7	7.3	6.6	5.7	5.0	4.2	3.8	3.1
80°	6.6	5.7	5.0	4.7	4.2	3.8	3.5	2.8	1.9	1.6	1.2
82.5°	3.8	3.5	3.1	2.8	2.3	1.9	1.6	1.6	1.2	0.7	0.4
85°	1.9	1.6	1.2	1.2	0.7	0.7	0.7	0.4	0.4	0.4	0.4
87.5°	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
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):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	257.6	257.6	257.6	257.6	257.6	257.6	257.6	257.6	257.6	257.6	257.6
2.5°	256.5	256.0	255.7	255.3	255.3	254.6	254.6	254.1	253.4	253.0	253.0
5°	254.1	253.0	252.2	251.8	251.5	250.3	249.9	249.2	248.4	247.7	247.2
7.5°	250.7	248.7	248.0	247.7	246.5	245.3	244.5	243.4	242.3	241.1	240.7
10°	246.5	244.5	242.6	241.8	240.7	239.9	238.3	236.9	235.7	234.5	233.4
12.5°	241.1	238.8	236.9	236.0	235.0	233.4	231.0	230.3	228.4	227.5	226.1
15°	235.0	232.2	230.3	229.1	228.0	225.6	224.1	222.6	220.6	219.9	218.3
17.5°	227.2	224.1	222.2	221.1	220.2	218.3	216.1	214.1	212.2	211.4	210.3
20°	218.0	216.1	213.3	212.2	211.4	209.1	206.8	206.0	204.4	202.9	201.8
22.5°	207.6	205.6	202.9	201.8	201.5	199.5	197.5	196.4	195.2	194.2	193.0
25°	196.8	194.5	192.1	191.4	190.7	189.1	187.6	186.7	185.7	184.8	184.1
27.5°	185.3	182.9	181.0	179.8	179.1	177.9	177.2	176.4	175.6	174.9	174.4
30°	173.0	170.6	169.0	168.3	167.6	167.1	166.0	165.5	165.2	164.5	164.8
32.5°	160.6	158.7	157.2	156.0	156.0	155.3	154.8	154.8	154.4	154.4	154.4
35°	147.1	145.9	144.8	144.4	144.0	143.6	143.3	143.6	143.3	143.6	144.0
37.5°	134.8	133.6	132.9	132.5	132.1	132.5	132.1	132.1	132.5	133.2	133.6
40°	122.1	121.3	120.5	120.9	120.5	120.5	120.5	121.7	122.1	122.5	122.8
42.5°	110.1	109.4	108.9	108.9	109.4	108.9	109.8	110.1	111.0	112.0	112.9
45°	98.6	98.2	98.2	98.6	98.2	99.0	99.0	99.7	100.9	101.6	102.5
47.5°	87.9	87.9	87.9	88.2	88.2	88.6	89.3	89.8	90.5	91.2	92.0
50°	77.8	78.2	78.5	78.5	78.5	79.4	80.1	80.4	80.9	81.3	82.4
52.5°	68.9	69.3	69.3	69.7	70.1	70.5	70.9	71.6	72.1	72.8	73.1
55°	60.4	60.4	61.3	61.6	61.6	61.6	62.4	62.4	63.2	63.6	64.3
57.5°	52.4	52.8	52.8	53.1	53.1	53.5	53.9	54.3	54.7	55.1	55.4
60°	44.6	44.6	44.6	45.0	45.5	45.8	45.5	46.2	46.2	47.0	47.4
62.5°	37.3	37.7	37.7	37.7	37.7	37.7	37.7	38.2	38.5	38.9	39.3
65°	30.4	30.4	30.4	30.0	30.4	30.0	30.4	30.8	30.8	31.2	31.6
67.5°	23.5	23.5	22.7	22.7	23.1	23.1	23.1	23.1	22.7	23.5	23.5
70°	17.0	16.5	16.2	15.8	15.8	15.4	15.4	15.0	15.0	15.0	15.0
72.5°	11.1	10.4	9.6	9.2	8.9	8.9	8.1	7.7	8.1	8.1	8.1
75°	5.7	5.0	4.7	4.2	3.8	3.8	3.5	3.5	3.5	3.5	3.5
77.5°	2.3	1.9	1.6	1.6	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	0.7	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
85°	0.4	0.0	0.0	0.4	0.0	0.4	0.4	0.4	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	257.6	257.6	257.6	257.6	257.6	257.6	257.6	257.6
2.5°	252.7	252.7	252.2	252.7	251.8	252.2	251.8	251.8
5°	246.8	246.1	246.1	246.1	245.7	245.7	245.3	245.3
7.5°	239.9	239.5	239.2	238.8	238.3	238.0	238.0	238.0
10°	232.9	232.2	232.2	231.9	231.0	230.7	230.7	230.7
12.5°	224.9	224.6	224.1	224.1	222.6	223.0	222.6	222.6
15°	217.3	216.8	216.8	215.7	214.9	214.9	214.9	214.5
17.5°	209.1	208.8	208.4	207.6	206.8	206.8	206.4	206.8
20°	200.6	200.3	199.5	199.5	199.1	198.7	198.0	198.3
22.5°	192.1	191.4	191.0	191.0	190.7	190.7	189.8	189.8
25°	183.3	182.9	182.5	182.9	182.2	182.2	181.3	181.3
27.5°	174.0	173.7	173.7	173.7	173.3	173.7	173.3	173.3
30°	164.8	164.8	164.5	164.5	164.8	164.5	164.8	165.2
32.5°	154.8	154.8	155.3	155.3	155.6	155.6	155.6	155.6
35°	144.4	145.2	145.2	145.6	145.9	146.4	146.4	146.8
37.5°	134.8	135.1	135.5	136.0	136.7	136.7	136.7	136.7
40°	124.4	124.7	125.6	125.2	126.6	127.1	126.6	126.6
42.5°	113.6	114.4	114.8	115.5	115.9	116.7	117.1	117.1
45°	103.5	104.0	104.7	105.6	105.9	107.0	107.0	107.0
47.5°	93.2	94.0	94.3	95.2	95.5	96.7	97.1	96.7
50°	83.2	83.9	84.7	84.7	85.8	86.3	87.0	87.4
52.5°	73.5	74.0	74.7	75.1	75.9	76.6	77.0	77.4
55°	64.3	64.8	65.5	65.5	66.7	67.0	67.8	67.8
57.5°	55.9	56.3	57.0	56.6	57.3	58.2	58.2	57.8
60°	47.8	47.8	47.8	48.5	49.0	49.3	49.7	49.7
62.5°	39.3	40.1	40.5	40.5	40.8	41.2	41.2	40.8
65°	31.6	32.3	32.7	32.7	33.2	33.2	33.2	33.5
67.5°	23.8	23.8	23.8	24.3	23.8	23.8	23.8	23.8
70°	15.0	15.0	15.0	15.0	14.6	15.0	15.0	15.4
72.5°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
75°	3.5	3.5	3.5	3.8	3.5	3.5	3.5	3.5
77.5°	1.6	1.2	1.6	1.6	1.2	1.2	1.2	1.2
80°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
85°	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180°    - - 45°-225°    - - - - 90°-270°















(END OF REPORT)