

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: P584182

Luminaire Tested: **HC825D010-HM82555927-81WWW**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584182
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC825D010-HM82555927-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1810.8 lumens
Efficiency: N/A
Efficacy: 67.6 lumens/watt
Spacing Criteria (0/90/45): 1.09 / 1.04 / 1.13
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

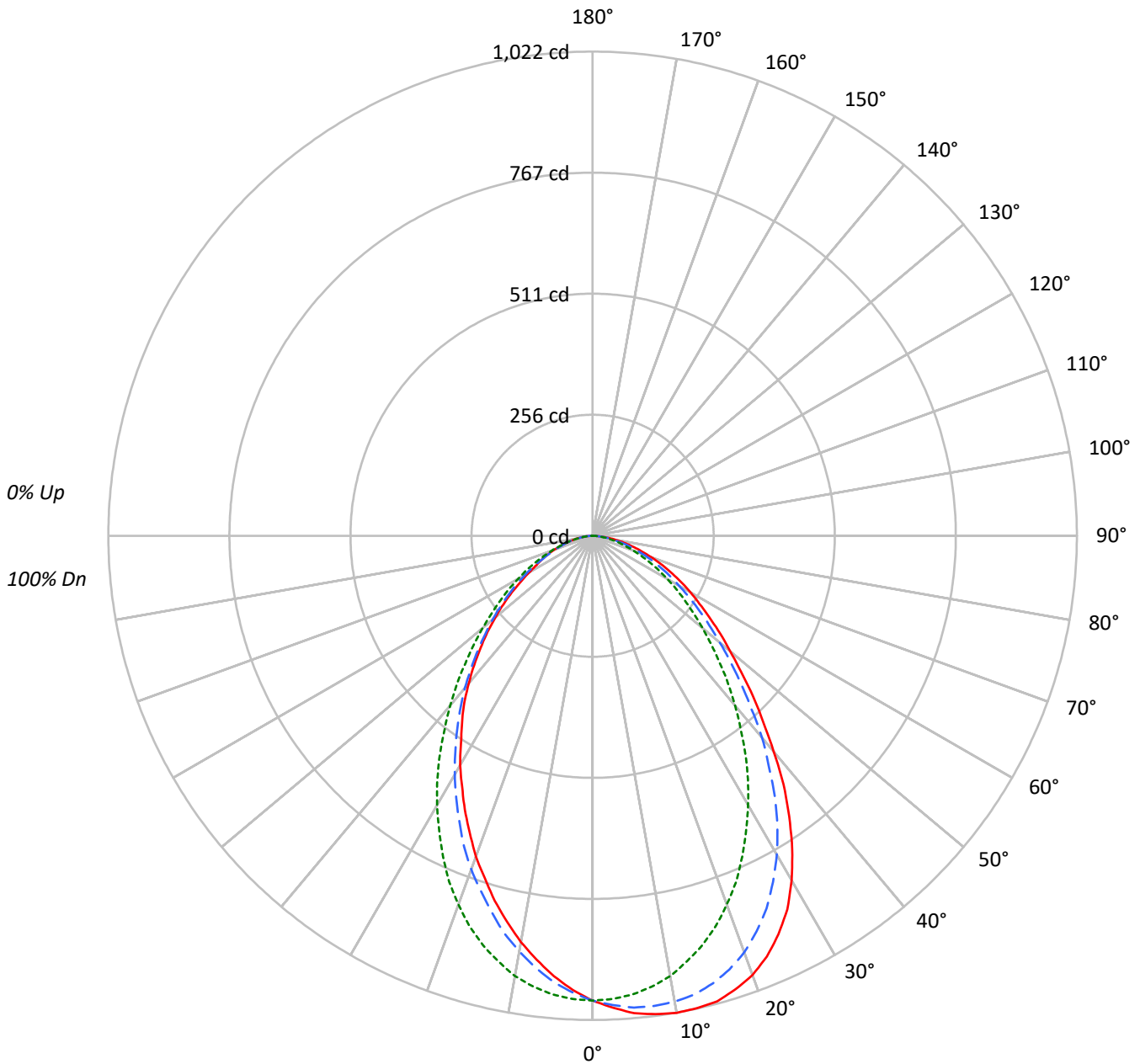
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87								
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76								
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66								
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	68	64	60	58								
5	81	69	61	55	79	68	61	55	66	60	54	64	59	54	63	57	53	51								
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46								
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41								
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38								
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34								
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	30257	30257	30257
5°	31319	30081	28889
10°	32013	29552	27263
15°	32470	28559	25459
20°	32369	27174	23634
25°	31571	25413	21697
30°	29913	23369	19911
35°	27213	21149	18088
40°	23899	18811	16347
45°	20845	16545	14574
50°	18134	14497	12838
55°	16177	12741	11166
60°	14697	11163	9522
65°	13207	9712	8639
70°	11757	8277	7808
75°	10318	6970	6672
80°	8737	5683	5913
85°	6581	4246	4706



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.9	5.1
10°-20°	253.2	14.0
20°-30°	351.5	19.4
30°-40°	363.4	20.1
40°-50°	304.3	16.8
50°-60°	220.9	12.2
60°-70°	139.4	7.7
70°-80°	69.1	3.8
80°-90°	17.2	0.9
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°	696.6	38.5
0°-40°	1060.0	58.5
0°-60°	1585.1	87.5
0°-90°	1810.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1810.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	981	981	981	981	981	
5°	1012	1000	972	945	933	97
15°	1017	978	895	823	798	286
25°	928	868	747	666	638	425
35°	723	670	562	498	480	450
45°	478	443	379	342	334	370
55°	301	274	237	217	208	272
65°	181	158	133	117	118	181
75°	87	72	58	56	56	93
85°	19	15	12	13	13	23
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°	981.2	981.2	981.2	981.2	981.2	981.2	981.2	981.2	981.2	981.2	981.2
2.5°	997.1	997.1	998.4	997.1	997.1	997.1	995.7	995.7	994.5	994.5	991.8
5°	1011.8	1009.1	1011.8	1009.1	1009.1	1009.1	1007.7	1005.2	1003.8	1001.1	999.8
7.5°	1018.4	1017.1	1017.1	1015.8	1015.8	1014.5	1013.1	1011.8	1006.4	1005.2	1001.1
10°	1022.4	1021.1	1021.1	1019.7	1017.1	1017.1	1014.5	1013.1	1006.4	1003.8	998.4
12.5°	1021.1	1021.1	1021.1	1019.7	1015.8	1014.5	1011.8	1007.7	1002.5	997.1	991.8
15°	1017.1	1017.1	1014.5	1013.1	1009.1	1006.4	1005.2	998.4	993.2	986.4	978.5
17.5°	1003.8	1003.8	1002.5	999.8	995.7	993.2	990.5	983.8	978.5	967.8	959.9
20°	986.4	985.1	983.8	979.8	975.8	974.4	970.5	961.2	954.5	946.5	935.9
22.5°	961.2	959.9	958.5	955.8	949.2	946.5	943.8	937.2	925.2	917.2	903.9
25°	927.9	927.9	925.2	921.3	914.5	912.0	907.9	901.3	890.7	878.7	868.0
27.5°	889.3	888.0	883.9	881.3	876.0	871.9	865.3	857.3	846.7	837.4	824.0
30°	840.1	840.1	837.4	833.4	826.7	824.0	818.8	809.5	798.8	786.8	777.5
32.5°	784.1	784.1	780.1	777.5	773.5	766.8	765.5	754.8	745.5	736.2	725.6
35°	722.9	724.2	721.5	716.3	709.5	709.5	706.9	697.5	686.9	677.6	669.6
37.5°	661.7	657.6	656.3	653.7	649.7	644.4	641.7	637.7	628.4	621.7	609.7
40°	593.7	595.0	592.5	589.8	588.4	584.4	583.0	576.4	569.8	561.8	556.5
42.5°	532.5	532.5	532.5	529.9	527.2	523.2	521.8	517.9	509.9	504.5	496.6
45°	478.0	473.9	473.9	472.6	471.2	468.7	464.6	461.9	456.7	452.6	443.3
47.5°	424.7	426.0	424.7	423.3	419.3	418.0	416.7	411.4	406.1	402.0	395.4
50°	378.0	380.7	378.0	378.0	375.5	374.1	371.4	367.4	363.5	356.7	350.1
52.5°	339.5	339.5	338.1	336.8	332.8	330.2	328.8	327.5	320.8	315.5	310.2
55°	300.9	302.2	302.2	298.2	296.9	294.2	292.9	288.9	286.2	278.2	274.2
57.5°	267.6	266.2	267.6	264.9	262.3	259.6	258.3	255.6	251.6	246.3	241.0
60°	238.3	235.6	235.6	234.3	231.7	230.3	227.7	223.6	219.7	214.3	210.4
62.5°	209.0	207.7	206.3	205.0	202.3	201.1	199.7	195.7	191.7	187.7	183.7
65°	181.0	181.0	179.8	177.1	175.7	174.4	173.0	170.5	165.1	162.4	158.5
67.5°	155.8	154.4	154.4	151.7	149.1	147.8	147.8	145.1	141.1	137.2	134.5
70°	130.4	131.8	130.4	129.1	126.5	126.5	123.8	122.5	117.2	115.8	111.8
72.5°	107.9	107.9	106.5	106.5	103.8	102.5	102.5	99.8	97.2	94.5	91.8
75°	86.6	86.6	86.6	85.2	83.9	81.2	81.2	79.9	77.3	74.6	71.9
77.5°	67.9	66.6	66.6	65.3	63.9	62.6	62.6	61.2	58.5	57.2	54.6
80°	49.2	47.9	47.9	47.9	45.3	46.5	45.3	44.0	42.6	41.3	39.9
82.5°	32.0	33.3	33.3	32.0	30.6	30.6	30.6	29.3	29.3	27.9	26.6
85°	18.6	18.6	18.6	18.6	17.3	17.3	17.3	15.9	15.9	15.9	14.7
87.5°	8.0	8.0	8.0	8.0	8.0	8.0	6.6	6.6	6.6	6.6	6.6
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°	981.2	981.2	981.2	981.2	981.2	981.2	981.2	981.2	981.2	981.2	981.2
2.5°	991.8	989.1	987.8	986.4	986.4	985.1	983.8	981.2	981.2	978.5	977.1
5°	997.1	993.2	990.5	987.8	986.4	983.8	981.2	977.1	975.8	971.8	967.8
7.5°	998.4	991.8	989.1	983.8	981.2	978.5	973.2	969.2	963.9	959.9	954.5
10°	993.2	987.8	981.2	974.4	973.2	969.2	961.2	955.8	949.2	943.8	935.9
12.5°	985.1	977.1	970.5	962.5	958.5	954.5	946.5	938.5	929.2	919.9	912.0
15°	971.8	962.5	953.2	943.8	938.5	934.5	925.2	915.9	906.6	894.6	886.6
17.5°	951.9	941.2	931.9	919.9	914.5	910.6	898.6	888.0	876.0	864.0	856.0
20°	926.5	913.2	902.7	889.3	885.3	878.7	866.7	854.7	841.3	828.1	818.8
22.5°	893.2	880.0	868.0	854.7	848.0	841.3	829.4	814.7	801.4	790.7	781.4
25°	854.7	842.7	828.1	816.1	808.1	800.1	786.8	774.8	762.8	746.9	737.6
27.5°	812.0	797.5	786.8	770.8	762.8	757.5	742.9	726.9	716.3	701.6	690.9
30°	764.2	750.8	738.8	722.9	714.9	709.5	696.2	681.6	671.0	656.3	645.6
32.5°	713.6	698.9	684.3	673.7	664.3	659.0	644.4	635.0	621.7	609.7	597.7
35°	659.0	644.4	633.7	619.0	613.8	608.4	596.4	584.4	572.4	561.8	552.4
37.5°	600.4	589.8	577.8	567.1	563.1	557.8	543.1	532.5	523.2	512.5	504.5
40°	543.1	533.8	525.8	515.2	508.6	504.5	493.9	484.6	473.9	467.3	459.2
42.5°	491.2	480.5	472.6	464.6	458.0	454.0	444.7	438.0	430.0	423.3	414.0
45°	436.7	431.3	422.0	415.4	411.4	406.1	399.4	391.4	384.8	379.4	372.8
47.5°	388.7	383.4	376.7	368.7	366.0	362.1	355.5	350.1	344.8	339.5	332.8
50°	344.8	338.1	332.8	327.5	324.9	320.8	314.2	311.5	307.5	302.2	298.2
52.5°	304.8	299.5	294.2	287.5	286.2	283.6	279.6	274.2	270.3	267.6	264.9
55°	268.9	263.5	259.6	254.2	252.9	250.3	244.9	242.2	239.7	237.0	234.3
57.5°	237.0	231.7	226.3	223.6	221.0	218.3	217.0	213.0	210.4	209.0	206.3
60°	207.7	202.3	198.4	194.3	193.0	191.7	189.1	186.4	183.7	181.0	179.8
62.5°	179.8	174.4	171.7	169.1	166.4	166.4	163.7	161.0	158.5	157.1	154.4
65°	154.4	151.7	147.8	143.8	142.4	142.4	138.5	137.2	135.8	133.1	130.4
67.5°	130.4	127.8	123.8	122.5	121.1	119.8	118.4	115.8	113.2	111.8	109.1
70°	109.1	106.5	103.8	102.5	101.2	99.8	97.2	95.9	93.2	91.8	90.5
72.5°	87.8	86.6	83.9	82.5	81.2	79.9	78.5	77.3	74.6	73.2	71.9
75°	70.5	69.2	66.6	65.3	63.9	63.9	62.6	59.9	58.5	58.5	57.2
77.5°	53.3	51.9	50.6	49.2	47.9	47.9	46.5	45.3	44.0	44.0	42.6
80°	38.6	37.2	36.0	36.0	36.0	34.6	33.3	33.3	32.0	32.0	30.6
82.5°	25.3	25.3	24.0	24.0	24.0	22.7	22.7	21.3	21.3	21.3	21.3
85°	14.7	14.7	14.7	13.3	13.3	13.3	13.3	13.3	13.3	12.0	13.3
87.5°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	5.4	5.4	5.4
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°	981.2	981.2	981.2	981.2	981.2	981.2	981.2	981.2	981.2	981.2	981.2
2.5°	975.8	974.4	971.8	971.8	969.2	969.2	967.8	966.5	965.1	963.9	962.5
5°	966.5	961.2	958.5	957.2	954.5	953.2	949.2	946.5	945.2	942.6	939.9
7.5°	949.2	943.8	938.5	937.2	935.9	930.6	926.5	922.6	919.9	917.2	914.5
10°	929.2	923.9	917.2	914.5	912.0	905.2	900.0	895.9	890.7	885.3	883.9
12.5°	905.2	897.3	889.3	886.6	882.6	876.0	870.7	864.0	860.0	853.3	852.0
15°	877.3	868.0	861.4	854.7	852.0	845.4	836.0	830.7	822.7	820.0	813.4
17.5°	844.0	834.7	825.4	822.7	818.8	809.5	800.1	793.4	785.5	781.4	777.5
20°	809.5	797.5	788.2	785.5	780.1	772.1	762.8	756.2	749.5	741.5	737.6
22.5°	769.4	756.2	748.1	741.5	740.2	730.9	720.2	714.9	709.5	702.9	697.5
25°	725.6	713.6	704.3	698.9	696.2	688.2	680.3	673.7	665.6	661.7	654.9
27.5°	680.3	672.3	660.3	654.9	651.0	644.4	635.0	631.0	623.1	617.7	613.8
30°	636.3	624.3	617.7	611.1	607.0	600.4	592.5	588.4	581.8	576.4	572.4
32.5°	588.4	580.5	571.2	568.5	563.1	556.5	551.2	544.5	539.2	533.8	532.5
35°	544.5	533.8	524.5	521.8	517.9	511.2	508.6	504.5	497.9	496.6	491.2
37.5°	496.6	491.2	480.5	476.6	475.3	469.9	464.6	461.9	458.0	454.0	452.6
40°	451.3	444.7	439.3	435.3	432.7	428.6	423.3	422.0	419.3	414.0	412.7
42.5°	408.7	402.0	396.8	395.4	391.4	387.4	384.8	380.7	379.4	378.0	375.5
45°	367.4	363.5	358.1	356.7	355.5	350.1	347.4	344.8	342.2	340.8	338.1
47.5°	330.2	326.1	322.2	320.8	318.2	316.8	312.9	311.5	307.5	306.2	304.8
50°	294.2	291.6	288.9	287.5	284.9	283.6	280.9	278.2	275.5	274.2	273.0
52.5°	262.3	259.6	256.9	255.6	254.2	251.6	249.0	246.3	244.9	243.6	242.2
55°	231.7	229.0	227.7	226.3	225.0	223.6	219.7	218.3	217.0	215.7	213.0
57.5°	203.7	201.1	198.4	198.4	197.0	195.7	193.0	190.4	190.4	187.7	185.0
60°	178.4	175.7	173.0	171.7	170.5	167.8	166.4	165.1	163.7	162.4	159.8
62.5°	151.7	150.4	147.8	147.8	145.1	143.8	142.4	141.1	139.7	137.2	135.8
65°	129.1	127.8	125.2	123.8	123.8	122.5	119.8	118.4	117.2	117.2	115.8
67.5°	107.9	106.5	103.8	102.5	102.5	101.2	99.8	99.8	98.5	97.2	98.5
70°	89.2	86.6	86.6	85.2	85.2	83.9	82.5	82.5	82.5	83.9	83.9
72.5°	70.5	69.2	67.9	67.9	67.9	67.9	66.6	66.6	67.9	69.2	69.2
75°	56.0	54.6	54.6	54.6	53.3	53.3	54.6	54.6	56.0	56.0	56.0
77.5°	41.3	41.3	41.3	41.3	41.3	41.3	42.6	42.6	44.0	44.0	44.0
80°	30.6	30.6	30.6	30.6	30.6	32.0	32.0	32.0	32.0	32.0	33.3
82.5°	21.3	21.3	21.3	21.3	21.3	21.3	21.3	22.7	22.7	22.7	22.7
85°	12.0	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
87.5°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P584182

CATALOG NUMBER: HC825D010-HM82555927-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	981.2	981.2	981.2	981.2	981.2	981.2	981.2	981.2
2.5°	961.2	961.2	961.2	962.5	959.9	959.9	959.9	959.9
5°	938.5	937.2	935.9	937.2	934.5	934.5	933.3	933.3
7.5°	910.6	909.3	907.9	907.9	905.2	905.2	903.9	902.7
10°	880.0	877.3	878.7	876.0	874.6	873.3	871.9	870.7
12.5°	846.7	844.0	842.7	840.1	837.4	836.0	837.4	834.7
15°	810.7	806.8	805.4	802.7	800.1	798.8	798.8	797.5
17.5°	770.8	768.2	766.8	764.2	762.8	760.1	758.8	757.5
20°	733.5	726.9	728.2	725.6	724.2	718.9	718.9	720.2
22.5°	692.3	688.2	685.7	683.0	681.6	678.9	678.9	677.6
25°	651.0	647.0	645.6	643.0	641.7	639.0	637.7	637.7
27.5°	611.1	605.7	605.7	603.1	600.4	599.1	597.7	596.4
30°	568.5	564.4	563.1	563.1	561.8	561.8	557.8	559.2
32.5°	528.5	525.8	524.5	521.8	521.8	520.6	520.6	516.5
35°	488.6	484.6	485.9	483.2	481.9	480.5	481.9	480.5
37.5°	449.9	447.3	447.3	444.7	444.7	443.3	442.0	444.7
40°	411.4	410.0	408.7	407.3	408.7	407.3	404.7	406.1
42.5°	372.8	372.8	371.4	371.4	370.1	370.1	370.1	370.1
45°	338.1	336.8	336.8	335.4	335.4	335.4	335.4	334.2
47.5°	303.6	302.2	302.2	302.2	300.9	300.9	299.5	300.9
50°	270.3	270.3	268.9	268.9	270.3	268.9	267.6	267.6
52.5°	239.7	239.7	238.3	238.3	237.0	235.6	237.0	237.0
55°	211.6	210.4	209.0	209.0	207.7	206.3	206.3	207.7
57.5°	185.0	183.7	182.4	182.4	179.8	178.4	178.4	178.4
60°	159.8	157.1	157.1	155.8	155.8	154.4	154.4	154.4
62.5°	135.8	134.5	134.5	134.5	134.5	133.1	133.1	133.1
65°	115.8	115.8	115.8	117.2	117.2	118.4	118.4	118.4
67.5°	99.8	101.2	101.2	101.2	102.5	102.5	102.5	101.2
70°	85.2	85.2	85.2	86.6	86.6	86.6	86.6	86.6
72.5°	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5
75°	56.0	57.2	57.2	57.2	56.0	57.2	57.2	56.0
77.5°	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
80°	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3
82.5°	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7
85°	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
87.5°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
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)