

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: PORTFOLIO

Report Number: P858508

Luminaire Tested: **LD4C20W2N2765D010 4LBSWNL_4000K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858508
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251556)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 11/9/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C20W2N2765D010 4LBSWNLI_4000K
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, W2N2765 LEDS
AND 4LBSWNLI TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

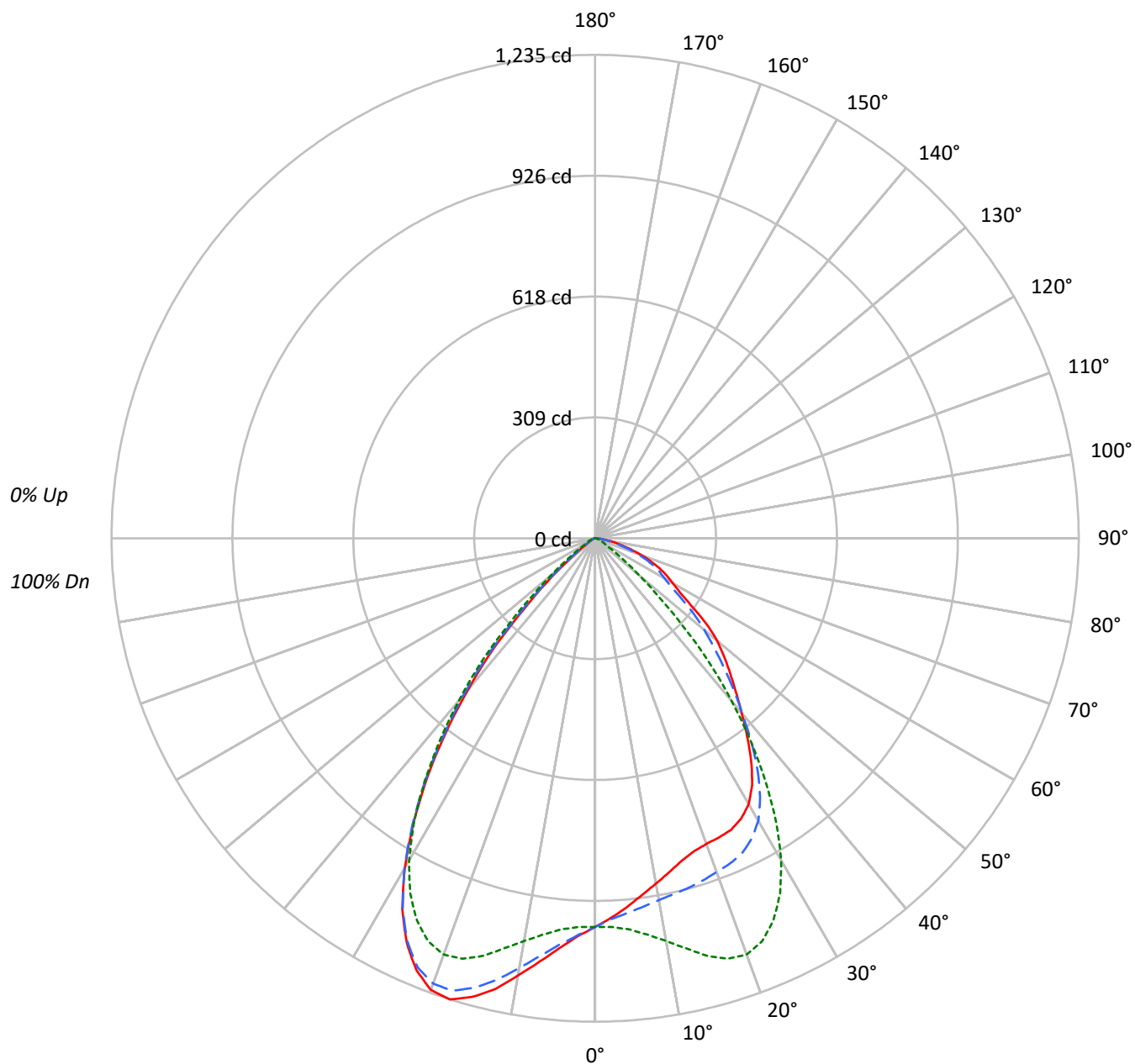
Lumens per Lamp: N/A
Luminaire Lumens: 1832.0 lumens
Efficiency: N/A
Efficacy: 72.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 25.4
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	112	108	105	102	109	106	103	101	102	100	98		98	96	95		95
2	104	98	93	89	102	96	92	88	93	89	86		90	87	84		87
3	97	89	83	78	95	88	82	77	85	80	76		82	78	75		80
4	91	81	75	69	89	80	74	69	78	72	68		76	71	67		74
5	85	75	67	62	83	74	67	62	72	66	61		70	65	60		68
6	79	69	61	56	78	68	61	56	66	60	55		64	59	55		63
7	75	63	56	51	73	62	55	51	61	55	50		60	54	50		58
8	70	58	51	46	69	58	51	46	57	50	46		55	50	46		54
9	66	54	47	42	65	54	47	42	53	46	42		52	46	42		51
10	62	51	44	39	61	50	43	39	49	43	39		48	43	39		47

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	121969	121969	121969
5°	116515	123705	129625
10°	111712	130312	141465
15°	108465	140440	154291
20°	108604	147917	160468
25°	111385	145991	154423
30°	111232	134766	137887
35°	104189	113907	112347
40°	93322	86874	81069
45°	84664	55163	45260
50°	77788	27981	19323
55°	63850	12487	6383
60°	56046	7003	3514
65°	52732	5262	2645
70°	45151	4203	2335
75°	34461	3085	1851
80°	24762	1839	920
85°	18184	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.4	5.3
10°-20°	300.5	16.4
20°-30°	465.0	25.4
30°-40°	458.1	25.0
40°-50°	281.3	15.4
50°-60°	125.1	6.8
60°-70°	69.9	3.8
70°-80°	30.2	1.7
80°-90°	5.4	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°	862.0	47.0
0°-40°	1320.1	72.1
0°-60°	1726.5	94.2
0°-90°	1832.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1832.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	993	993	993	993	993	
5°	945	960	1003	1042	1051	89
15°	853	924	1104	1188	1213	242
25°	822	888	1077	1135	1139	377
35°	695	723	760	757	749	431
45°	487	463	318	277	260	377
55°	298	270	58	34	30	274
65°	181	163	18	10	9	178
75°	73	62	6	4	4	80
85°	13	10	0	0	0	16
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°	992.8	992.8	992.8	992.8	992.8	992.8	992.8	992.8	992.8	992.8	992.8
2.5°	969.4	969.4	969.4	969.4	972.0	968.1	972.0	972.0	975.9	977.2	973.3
5°	944.8	943.5	944.8	944.8	947.4	946.1	950.0	952.6	957.8	960.4	960.4
7.5°	918.9	918.9	918.9	921.5	925.3	924.1	927.9	931.8	939.6	944.8	948.7
10°	895.5	894.3	898.1	899.4	903.3	903.3	909.8	913.7	922.8	933.2	938.3
12.5°	873.5	872.2	874.8	878.7	885.2	885.2	890.4	896.9	909.8	921.5	930.5
15°	852.8	854.1	858.0	860.6	868.3	868.3	874.8	882.6	896.9	911.1	924.1
17.5°	838.5	839.8	842.4	846.3	854.1	854.1	860.6	869.6	885.2	900.7	916.3
20°	830.7	832.1	834.7	838.5	845.0	846.3	851.5	861.9	876.1	892.9	907.2
22.5°	826.9	829.5	832.1	834.7	841.1	841.1	847.6	855.4	869.6	886.5	899.4
25°	821.7	824.2	825.6	829.5	834.7	834.7	838.5	847.6	860.6	874.8	887.8
27.5°	807.4	810.0	811.3	815.2	820.4	819.1	824.2	830.7	842.4	855.4	865.7
30°	784.1	785.4	788.0	789.3	793.2	793.2	797.0	803.5	811.3	823.0	833.3
32.5°	746.5	749.1	750.4	751.7	755.6	754.3	755.6	759.5	767.2	777.6	784.1
35°	694.7	699.8	699.8	702.4	703.8	702.4	702.4	707.6	711.5	719.3	723.2
37.5°	637.6	641.6	640.2	642.8	644.1	640.2	642.8	644.1	649.3	653.2	654.5
40°	581.9	583.2	583.2	583.2	583.2	581.9	583.2	584.5	588.4	588.4	584.5
42.5°	531.4	532.7	532.7	530.1	532.7	531.4	531.4	531.4	531.4	526.2	522.3
45°	487.3	488.6	488.6	487.3	487.3	484.7	483.4	482.1	478.2	471.8	462.7
47.5°	445.8	448.4	449.7	447.1	445.8	443.2	443.2	435.5	430.3	422.5	409.6
50°	407.0	409.6	409.6	407.0	407.0	403.1	399.2	396.6	388.8	379.8	364.2
52.5°	357.7	361.6	361.6	360.3	360.3	355.1	353.8	348.6	342.1	331.8	318.8
55°	298.1	303.3	302.0	300.7	298.1	298.1	298.1	294.2	290.3	282.5	269.6
57.5°	255.3	256.6	256.6	255.3	255.3	252.7	252.7	248.9	247.5	239.8	229.4
60°	228.1	228.1	229.4	228.1	226.8	225.5	224.2	221.6	217.7	212.5	204.8
62.5°	206.0	207.4	207.4	206.0	204.8	203.5	202.2	199.6	197.0	193.1	185.3
65°	181.4	184.0	182.7	181.4	180.2	178.8	178.8	176.2	173.7	171.1	163.3
67.5°	154.2	155.5	156.8	154.2	154.2	152.9	152.9	150.3	149.0	143.8	138.7
70°	125.7	127.0	127.0	125.7	125.7	124.4	124.4	123.1	121.8	118.0	112.8
72.5°	98.5	99.8	98.5	97.2	97.2	97.2	95.9	94.6	93.3	90.7	86.8
75°	72.6	72.6	73.9	72.6	71.3	71.3	70.0	70.0	67.4	66.1	62.2
77.5°	51.8	53.1	51.8	51.8	50.5	49.3	49.3	47.9	47.9	46.7	44.1
80°	35.0	35.0	36.3	35.0	33.7	35.0	33.7	32.4	32.4	31.1	28.5
82.5°	22.0	23.3	22.0	22.0	22.0	22.0	22.0	20.7	20.7	19.4	18.1
85°	12.9	12.9	12.9	12.9	12.9	12.9	12.9	11.7	11.7	11.7	10.4
87.5°	6.5	6.5	5.2	5.2	6.5	6.5	6.5	5.2	5.2	5.2	5.2
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°	992.8	992.8	992.8	992.8	992.8	992.8	992.8	992.8	992.8	992.8	992.8
2.5°	978.5	979.8	982.4	986.3	986.3	983.7	990.2	990.2	992.8	994.0	999.2
5°	968.1	970.7	975.9	982.4	983.7	982.4	991.5	995.4	999.2	1003.1	1010.9
7.5°	959.1	964.2	973.3	982.4	986.3	986.3	1000.5	1005.7	1013.5	1021.3	1030.3
10°	953.9	961.6	974.6	988.9	992.8	996.6	1013.5	1023.8	1034.2	1044.6	1057.6
12.5°	947.4	961.6	978.5	996.6	1004.4	1009.6	1032.9	1045.9	1060.2	1073.1	1090.0
15°	946.1	963.0	985.0	1008.3	1018.7	1026.4	1052.4	1070.5	1087.4	1104.2	1121.1
17.5°	940.9	961.6	988.9	1014.8	1027.8	1038.1	1067.9	1090.0	1109.4	1126.3	1145.7
20°	934.4	957.8	987.6	1016.1	1030.3	1040.7	1073.1	1093.9	1115.9	1131.4	1149.6
22.5°	925.3	948.7	978.5	1007.0	1020.0	1029.0	1061.4	1079.6	1099.0	1114.6	1131.4
25°	909.8	931.8	957.8	981.1	994.0	1001.8	1030.3	1047.2	1061.4	1077.0	1092.5
27.5°	887.8	904.6	926.7	943.5	951.3	959.1	982.4	996.6	1009.6	1022.6	1032.9
30°	848.9	861.9	877.4	891.7	899.4	900.7	922.8	930.5	940.9	950.0	957.8
32.5°	797.0	807.4	816.5	824.2	829.5	830.7	847.6	850.2	860.6	860.6	872.2
35°	731.0	736.1	742.6	742.6	746.5	742.6	754.3	756.9	758.2	759.5	768.5
37.5°	655.8	658.4	662.3	654.5	654.5	650.6	654.5	657.1	651.9	651.9	658.4
40°	584.5	579.3	574.1	566.4	562.5	554.7	554.7	548.2	544.3	541.7	543.0
42.5°	515.8	504.2	492.5	475.6	467.8	460.1	452.3	443.2	440.6	434.2	430.3
45°	449.7	432.9	417.3	390.1	374.6	366.8	349.9	331.8	320.1	317.5	307.1
47.5°	394.0	369.3	343.4	311.1	295.5	281.2	256.6	241.1	225.5	217.7	211.2
50°	344.7	322.7	289.0	254.0	234.6	220.3	193.1	175.0	158.1	146.4	138.7
52.5°	302.0	277.3	246.3	206.0	186.7	171.1	141.3	120.5	106.3	94.6	85.6
55°	254.0	234.6	203.5	165.9	146.4	128.3	102.4	80.4	66.1	58.3	51.8
57.5°	219.0	202.2	172.4	136.1	118.0	101.1	75.1	57.0	45.3	37.6	33.7
60°	195.7	180.2	154.2	119.2	102.4	86.8	62.2	45.3	35.0	28.5	25.9
62.5°	176.2	160.7	137.4	105.0	90.7	75.1	53.1	37.6	28.5	23.3	19.4
65°	154.2	140.0	119.2	90.7	77.7	64.8	45.3	31.1	23.3	18.1	15.5
67.5°	130.9	118.0	99.8	75.1	64.8	54.4	36.3	25.9	19.4	15.5	12.9
70°	106.3	95.9	79.1	60.9	51.8	42.8	29.8	20.7	14.3	11.7	10.4
72.5°	81.6	72.6	60.9	46.7	38.9	32.4	22.0	15.5	11.7	9.1	7.8
75°	58.3	51.8	42.8	33.7	28.5	23.3	16.9	11.7	7.8	6.5	5.2
77.5°	40.2	36.3	29.8	23.3	19.4	16.9	11.7	7.8	6.5	5.2	3.9
80°	25.9	23.3	19.4	14.3	11.7	10.4	6.5	5.2	3.9	2.6	2.6
82.5°	15.5	14.3	11.7	7.8	6.5	5.2	3.9	2.6	2.6	1.3	1.3
85°	9.1	7.8	5.2	3.9	3.9	2.6	2.6	1.3	1.3	0.0	0.0
87.5°	3.9	2.6	2.6	1.3	1.3	1.3	1.3	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°	992.8	992.8	992.8	992.8	992.8	992.8	992.8	992.8	992.8	992.8	992.8
2.5°	996.6	1003.1	1001.8	1005.7	1004.4	1004.4	1010.9	1008.3	1014.8	1014.8	1016.1
5°	1010.9	1020.0	1020.0	1026.4	1025.2	1027.8	1034.2	1034.2	1042.0	1044.6	1044.6
7.5°	1031.6	1043.3	1045.9	1052.4	1053.7	1058.8	1064.1	1065.3	1075.7	1078.3	1079.6
10°	1060.2	1074.4	1078.3	1084.8	1087.4	1092.5	1099.0	1101.6	1114.6	1115.9	1121.1
12.5°	1095.1	1110.7	1114.6	1122.4	1123.7	1130.1	1139.2	1141.8	1154.7	1158.7	1162.5
15°	1128.9	1143.1	1149.6	1157.3	1158.7	1166.4	1174.2	1176.8	1188.5	1193.6	1197.6
17.5°	1152.2	1169.0	1172.9	1183.3	1183.3	1189.7	1197.6	1200.1	1211.8	1215.7	1218.3
20°	1157.3	1172.9	1178.1	1185.9	1187.1	1191.1	1197.6	1200.1	1210.5	1211.8	1215.7
22.5°	1137.9	1153.5	1156.1	1163.8	1165.1	1169.0	1174.2	1172.9	1185.9	1184.6	1185.9
25°	1096.5	1110.7	1110.7	1119.8	1118.5	1122.4	1124.9	1123.7	1135.3	1135.3	1135.3
27.5°	1036.8	1049.8	1051.1	1057.6	1053.7	1055.0	1057.6	1056.2	1064.1	1064.1	1064.1
30°	963.0	973.3	969.4	974.6	972.0	974.6	972.0	970.7	973.3	975.9	974.6
32.5°	870.9	878.7	878.7	880.0	880.0	872.2	869.6	869.6	868.3	867.1	867.1
35°	764.6	771.1	768.5	768.5	767.2	759.5	755.6	753.0	756.9	749.1	754.3
37.5°	655.8	657.1	653.2	651.9	645.4	645.4	639.0	633.7	636.3	635.1	629.9
40°	536.5	541.7	534.0	531.4	535.3	530.1	523.6	517.1	522.3	515.8	518.4
42.5°	419.9	418.6	416.0	416.0	416.0	408.2	407.0	405.6	407.0	401.8	397.9
45°	303.3	299.4	295.5	295.5	290.3	287.7	287.7	283.8	277.3	277.3	269.6
47.5°	204.8	195.7	193.1	191.8	189.2	189.2	186.7	184.0	182.7	176.2	176.2
50°	133.5	124.4	121.8	120.5	121.8	119.2	116.6	114.0	111.5	110.2	107.6
52.5°	80.4	76.5	73.9	72.6	70.0	68.7	67.4	64.8	63.5	63.5	62.2
55°	47.9	44.1	38.9	38.9	38.9	37.6	36.3	35.0	33.7	33.7	32.4
57.5°	29.8	27.2	24.6	23.3	23.3	23.3	22.0	22.0	22.0	22.0	20.7
60°	22.0	19.4	18.1	18.1	18.1	16.9	16.9	16.9	16.9	15.5	15.5
62.5°	16.9	15.5	14.3	14.3	12.9	12.9	12.9	12.9	12.9	12.9	11.7
65°	14.3	11.7	11.7	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
67.5°	10.4	9.1	9.1	9.1	9.1	7.8	7.8	7.8	7.8	7.8	7.8
70°	7.8	7.8	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
72.5°	6.5	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
75°	5.2	5.2	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
77.5°	3.9	3.9	3.9	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
80°	2.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	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	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°	992.8	992.8	992.8	992.8	992.8	992.8	992.8	992.8
2.5°	1016.1	1022.6	1016.1	1016.1	1020.0	1018.7	1021.3	1017.4
5°	1045.9	1055.0	1048.5	1047.2	1053.7	1052.4	1053.7	1051.1
7.5°	1082.2	1091.3	1084.8	1084.8	1091.3	1090.0	1093.9	1091.3
10°	1123.7	1134.0	1124.9	1126.3	1135.3	1134.0	1134.0	1134.0
12.5°	1166.4	1176.8	1171.6	1171.6	1178.1	1179.4	1180.7	1179.4
15°	1201.4	1211.8	1205.3	1205.3	1214.4	1213.1	1214.4	1213.1
17.5°	1222.1	1232.5	1224.8	1224.8	1232.5	1232.5	1233.8	1235.1
20°	1216.9	1228.6	1222.1	1219.5	1228.6	1228.6	1227.4	1227.4
22.5°	1187.1	1197.6	1192.3	1189.7	1196.2	1193.6	1192.3	1193.6
25°	1135.3	1145.7	1135.3	1135.3	1140.5	1139.2	1140.5	1139.2
27.5°	1065.3	1073.1	1062.7	1061.4	1066.7	1064.1	1062.7	1066.7
30°	972.0	979.8	974.6	970.7	977.2	973.3	970.7	972.0
32.5°	865.7	870.9	868.3	861.9	865.7	863.1	861.9	863.1
35°	749.1	755.6	745.2	743.9	750.4	745.2	742.6	749.1
37.5°	628.6	636.3	627.3	628.6	624.7	626.0	623.4	627.3
40°	514.5	513.2	510.7	509.3	510.7	506.7	509.3	505.5
42.5°	391.4	394.0	392.7	391.4	392.7	387.5	384.9	390.1
45°	272.2	270.9	268.3	265.7	265.7	264.4	264.4	260.5
47.5°	175.0	173.7	168.5	169.8	172.4	169.8	165.9	171.1
50°	106.3	105.0	105.0	103.7	106.3	103.7	101.1	101.1
52.5°	59.6	59.6	58.3	58.3	58.3	58.3	57.0	55.8
55°	32.4	31.1	31.1	31.1	29.8	29.8	29.8	29.8
57.5°	20.7	20.7	20.7	20.7	20.7	20.7	19.4	19.4
60°	15.5	15.5	15.5	15.5	14.3	15.5	14.3	14.3
62.5°	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
65°	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
67.5°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
70°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
72.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
75°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
77.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	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)