

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: io LED

Report Number: P273385

Luminaire Tested: **0.03-5W-840-10-ID-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273385
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (ITL89171-GONIOPHOTOMETRY)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: 0.03-5W-840-10-ID-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES .75 LINEAR LED LUMINAIRE, 10 DEGREE OPTIC.
VERY HIGH OUTPUT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 909.1 lumens
Efficiency: N/A
Efficacy: 49.7 lumens/watt
Spacing Criteria (0/90/45): 0.37 / 0.89 / 0.57
Luminous Opening: Rectangular (W 2.92' x L: 0.05' x H: 0')
CIE Type: Direct

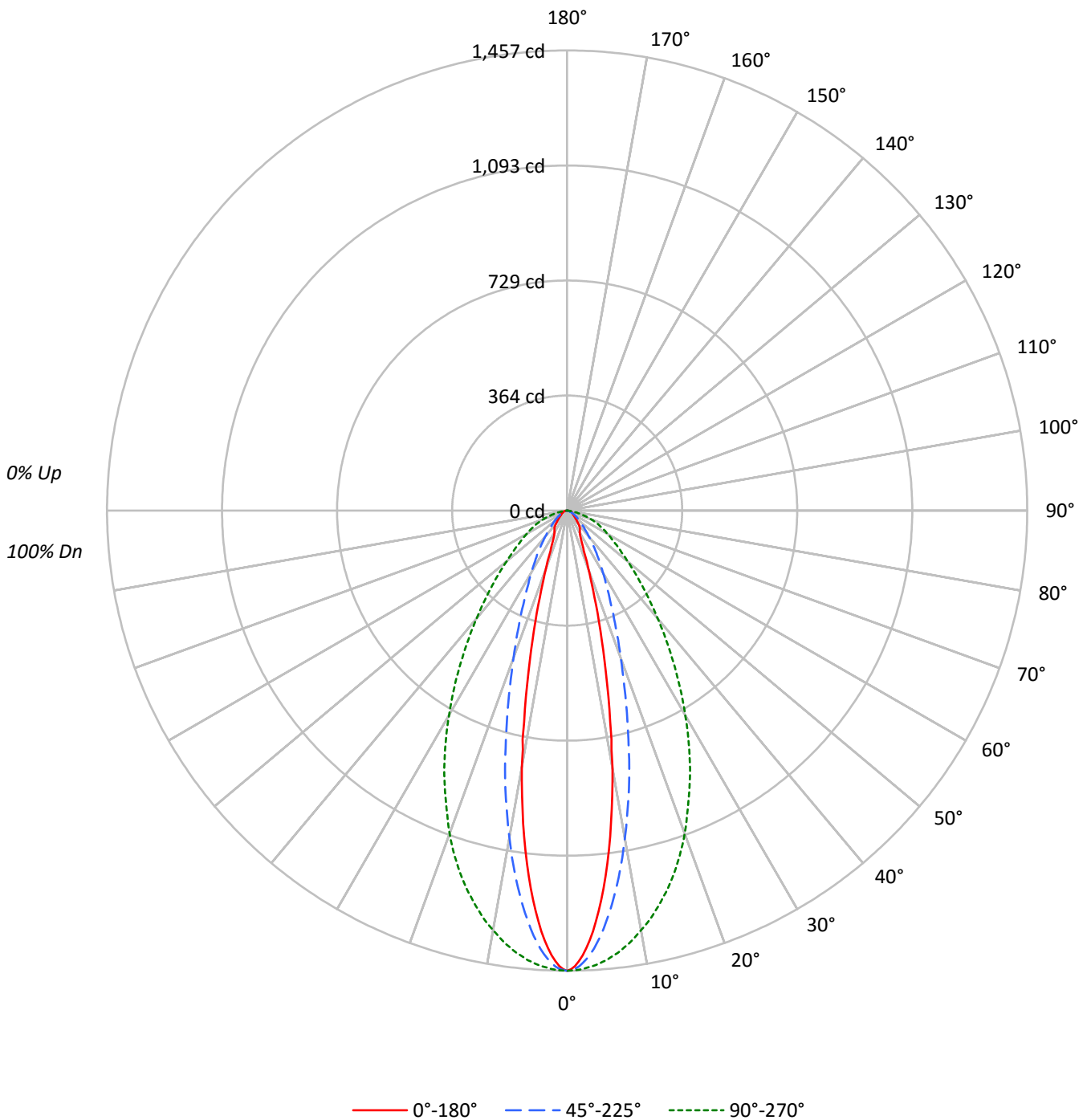
Input Watts (W): 18.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	112	109	106	103	110	107	104	102	103	101	99	99	97	96	95	94	93	91					91			
2	105	100	95	91	103	98	94	90	95	91	88	92	89	86	89	86	84	82					82			
3	99	92	86	81	97	90	85	80	87	83	79	85	81	78	83	79	77	75					75			
4	93	85	78	73	91	83	77	73	81	76	72	79	75	71	77	73	70	69					69			
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63					63			
6	83	73	66	62	82	72	66	61	71	65	61	69	64	61	68	64	60	59					59			
7	79	69	62	57	77	68	62	57	67	61	57	65	60	56	64	60	56	55					55			
8	75	64	58	53	74	64	58	53	63	57	53	62	56	53	61	56	53	51					51			
9	71	61	54	50	70	60	54	50	59	54	50	58	53	50	57	53	49	48					48			
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45					45			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	114734	114734	114734
5°	97833	104914	112912
10°	65963	84182	107862
15°	34559	61033	100727
20°	16430	41473	91198
25°	9208	28545	80007
30°	7227	20527	68028
35°	6776	15176	56331
40°	5776	11059	45858
45°	4543	8206	37288
50°	3760	6357	30633
55°	3349	5092	26190
60°	3165	4000	23194
65°	3353	3167	21125
70°	3407	2440	18553
75°	3224	2099	14175
80°	3128	1678	9113
85°	2349	1445	4788



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.5	13.0
10°-20°	218.2	24.0
20°-30°	192.7	21.2
30°-40°	150.6	16.6
40°-50°	103.7	11.4
50°-60°	65.9	7.3
60°-70°	38.9	4.3
70°-80°	17.1	1.9
80°-90°	3.3	0.4
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°	529.4	58.2
0°-40°	680.0	74.8
0°-60°	849.7	93.5
0°-90°	909.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	909.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1457	1457	1457	1457	1457	
5°	1238	1266	1328	1395	1429	105
15°	424	516	749	1054	1236	119
25°	106	148	329	671	921	53
35°	70	77	158	397	586	43
45°	41	46	74	222	335	32
55°	24	26	37	121	191	22
65°	18	16	17	58	113	18
75°	11	9	7	19	47	11
85°	3	3	2	2	5	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1457.3	1457.3	1457.3	1457.3	1457.3	1457.3	1457.3	1457.3	1457.3	1457.3	1457.3
0.5°	1452.0	1451.6	1451.1	1450.7	1450.1	1450.4	1451.5	1452.6	1453.6	1454.7	1454.9
1°	1442.5	1442.4	1442.3	1442.2	1442.1	1442.9	1444.8	1446.6	1448.5	1450.4	1451.2
1.5°	1427.1	1427.8	1428.3	1428.9	1429.5	1431.3	1434.3	1437.4	1440.5	1443.6	1445.0
2°	1409.1	1410.2	1411.2	1412.3	1413.4	1416.0	1420.2	1424.5	1428.7	1433.0	1435.9
2.5°	1386.9	1389.0	1391.1	1393.2	1395.3	1399.0	1404.3	1409.6	1414.9	1420.2	1424.9
3°	1363.0	1365.4	1368.0	1370.4	1372.9	1377.6	1384.7	1391.8	1398.8	1405.9	1412.4
3.5°	1334.9	1338.1	1341.3	1344.5	1347.6	1353.7	1362.7	1371.6	1380.6	1389.5	1397.3
4°	1304.7	1308.6	1312.5	1316.4	1320.3	1327.6	1338.3	1349.0	1359.7	1370.4	1380.8
4.5°	1271.9	1276.7	1281.5	1286.4	1291.1	1299.8	1312.5	1325.1	1337.7	1350.3	1363.1
5°	1237.9	1243.6	1249.3	1254.9	1260.5	1270.5	1284.8	1299.0	1313.3	1327.5	1343.1
5.5°	1201.9	1208.4	1214.8	1221.3	1227.8	1239.1	1255.2	1271.4	1287.5	1303.7	1322.0
6°	1164.3	1171.7	1179.1	1186.5	1194.0	1206.8	1225.0	1243.3	1261.6	1279.8	1300.8
6.5°	1124.5	1133.0	1141.5	1150.0	1158.5	1172.9	1193.2	1213.7	1234.0	1254.4	1277.9
7°	1083.2	1092.6	1102.1	1111.5	1120.9	1136.9	1159.7	1182.4	1205.2	1227.9	1254.5
7.5°	1041.3	1051.6	1061.8	1072.1	1082.4	1100.1	1125.3	1150.4	1175.6	1200.8	1230.1
8°	999.5	1010.4	1021.4	1032.3	1043.2	1062.5	1090.1	1117.6	1145.2	1172.8	1204.8
8.5°	956.5	968.3	980.1	991.8	1003.6	1024.5	1054.3	1084.0	1113.8	1143.6	1178.6
9°	914.1	926.8	939.4	952.0	964.6	986.7	1018.5	1050.3	1082.1	1113.9	1151.8
9.5°	870.2	882.5	894.6	906.9	919.1	942.9	978.1	1013.4	1048.5	1083.7	1124.4
10°	825.1	838.5	851.7	865.1	878.3	903.7	941.0	978.4	1015.7	1053.0	1096.7
10.5°	768.4	785.3	802.1	819.0	835.8	864.0	903.8	943.4	983.1	1022.8	1069.3
11°	737.7	752.2	766.6	781.1	795.7	823.8	865.9	908.0	950.0	992.0	1041.4
11.5°	683.6	701.2	718.7	736.3	753.8	784.7	829.1	873.6	918.0	962.4	1014.1
12°	642.3	660.3	678.3	696.3	714.4	746.6	793.1	839.6	886.2	932.7	986.7
12.5°	602.5	620.9	639.3	657.7	676.0	709.4	757.8	806.3	854.6	903.0	959.5
13°	563.3	582.0	600.5	619.2	637.7	672.2	722.3	772.4	822.7	872.8	932.0
13.5°	525.7	544.6	563.4	582.2	601.1	636.2	687.9	739.5	791.0	842.6	904.1
14°	490.2	509.2	528.1	547.1	566.1	601.8	654.3	706.8	759.3	811.9	876.1
14.5°	456.8	475.6	494.2	513.0	531.7	567.5	620.2	672.9	725.7	778.5	845.6
15°	424.0	442.6	461.2	479.8	498.4	534.5	588.0	641.7	695.2	748.8	818.3
16°	365.1	383.4	401.6	419.9	438.2	474.6	529.2	583.9	638.5	693.2	766.0
17°	312.1	329.8	347.4	365.1	382.8	419.2	474.3	529.4	584.5	639.6	715.2
18°	266.6	283.4	300.3	317.1	334.0	369.5	423.6	477.8	532.0	586.1	664.4
19°	228.9	243.9	258.8	273.8	288.7	323.2	377.1	431.1	485.0	538.9	618.8
20°	196.1	210.7	225.3	239.9	254.5	287.7	339.5	391.3	443.1	495.0	575.8
22.5°	137.8	148.8	159.9	171.0	182.1	211.6	259.4	307.2	355.0	402.8	483.2
25°	106.0	113.5	121.0	128.6	136.1	160.9	202.8	244.7	286.6	328.6	406.0
27.5°	89.0	93.6	98.3	102.8	107.4	127.5	163.2	198.9	234.6	270.3	342.4
30°	79.5	82.0	84.7	87.2	89.9	106.1	136.0	166.0	195.9	225.8	291.6
32.5°	74.7	75.8	76.8	77.9	79.0	91.6	115.8	140.1	164.4	188.7	248.3
35°	70.5	70.9	71.4	71.9	72.4	82.0	101.0	120.0	139.0	157.9	211.8
37.5°	64.7	65.3	65.8	66.5	67.0	74.3	88.3	102.4	116.4	130.4	178.9
40°	56.2	57.2	58.3	59.4	60.4	66.1	76.5	86.8	97.2	107.6	150.8
42.5°	47.7	48.9	50.0	51.2	52.4	56.9	64.9	72.7	80.7	88.5	126.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
45°	40.8	41.7	42.5	43.2	44.1	47.8	54.3	60.7	67.2	73.7	107.3
47.5°	35.0	35.7	36.4	37.1	37.8	40.7	45.9	51.1	56.3	61.5	90.7
50°	30.7	31.4	31.9	32.5	33.1	35.4	39.5	43.7	47.8	51.9	77.3
52.5°	27.6	27.9	28.3	28.6	28.9	30.8	34.1	37.4	40.7	44.0	65.8
55°	24.4	24.6	24.8	25.1	25.3	26.7	29.4	31.9	34.6	37.1	55.9
57.5°	22.3	22.3	22.3	22.3	22.3	23.2	25.1	26.9	28.8	30.7	46.7
60°	20.1	20.0	19.9	19.8	19.7	20.2	21.5	22.9	24.2	25.4	38.9
62.5°	19.1	18.8	18.3	18.0	17.7	17.8	18.5	19.3	19.9	20.7	31.9
65°	18.0	17.6	17.1	16.6	16.1	16.0	16.2	16.5	16.7	17.0	25.9
67.5°	16.4	16.0	15.5	15.1	14.5	14.2	14.1	14.0	13.9	13.8	20.6
70°	14.8	14.4	13.9	13.5	12.9	12.5	12.0	11.6	11.0	10.6	15.9
72.5°	13.2	12.6	12.1	11.4	10.9	10.4	9.9	9.4	8.9	8.5	12.4
75°	10.6	10.4	10.2	9.9	9.6	9.2	8.7	8.1	7.5	6.9	9.4
77.5°	8.5	8.3	8.1	7.7	7.5	7.2	6.7	6.3	5.7	5.3	7.0
80°	6.9	6.7	6.5	6.1	5.9	5.6	5.1	4.7	4.1	3.7	4.6
82.5°	4.8	4.7	4.6	4.5	4.3	4.0	3.7	3.4	3.0	2.6	3.0
85°	2.6	2.6	2.6	2.6	2.6	2.5	2.3	2.0	1.8	1.6	1.7
87.5°	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1.1	1.1	1.1	1.0
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1457.3	1457.3	1457.3	1457.3	1457.3	1457.3	1457.3	1457.3
0.5°	1455.1	1455.4	1455.6	1455.9	1456.0	1456.1	1456.2	1456.3
1°	1451.8	1452.6	1453.3	1453.8	1454.2	1454.5	1454.9	1455.2
1.5°	1446.6	1448.1	1449.7	1450.9	1451.7	1452.5	1453.3	1454.2
2°	1438.9	1441.8	1444.7	1446.8	1448.1	1449.5	1450.8	1452.0
2.5°	1429.7	1434.3	1439.1	1442.3	1443.9	1445.6	1447.2	1448.9
3°	1418.9	1425.3	1431.8	1436.2	1438.6	1441.0	1443.3	1445.7
3.5°	1405.3	1413.1	1421.1	1426.9	1430.8	1434.8	1438.6	1442.5
4°	1391.2	1401.5	1411.9	1419.4	1424.2	1428.8	1433.6	1438.3
4.5°	1375.9	1388.8	1401.6	1410.8	1416.3	1421.9	1427.4	1433.0
5°	1358.6	1374.1	1389.7	1401.0	1407.8	1414.8	1421.7	1428.7
5.5°	1340.4	1358.8	1377.1	1390.4	1398.3	1406.4	1414.3	1422.4
6°	1321.8	1342.7	1363.6	1378.8	1388.1	1397.3	1406.7	1416.0
6.5°	1301.4	1325.1	1348.6	1365.9	1376.8	1387.7	1398.7	1409.6
7°	1281.1	1307.7	1334.3	1353.7	1365.9	1378.0	1390.1	1402.2
7.5°	1259.2	1288.5	1317.6	1339.1	1352.7	1366.4	1380.1	1393.7
8°	1236.8	1268.9	1300.9	1324.6	1340.0	1355.5	1370.9	1386.3
8.5°	1213.6	1248.5	1283.5	1309.6	1326.7	1343.7	1360.8	1377.8
9°	1189.5	1227.3	1265.2	1293.4	1312.1	1330.9	1349.5	1368.3
9.5°	1165.2	1205.9	1246.7	1277.3	1297.6	1318.1	1338.4	1358.8
10°	1140.3	1184.1	1227.8	1260.6	1282.8	1304.9	1327.1	1349.2
10.5°	1115.8	1162.4	1208.9	1244.1	1267.9	1291.9	1315.7	1339.7
11°	1090.7	1140.1	1189.4	1227.0	1252.8	1278.5	1304.4	1330.2
11.5°	1065.8	1117.4	1169.2	1208.9	1236.6	1264.2	1291.9	1319.6
12°	1040.8	1094.9	1148.9	1190.6	1219.9	1249.3	1278.5	1307.9
12.5°	1016.1	1072.6	1129.1	1172.9	1203.7	1234.6	1265.4	1296.2
13°	991.1	1050.1	1109.3	1155.1	1187.4	1219.8	1252.1	1284.6
13.5°	965.6	1027.0	1088.5	1136.3	1170.4	1204.7	1238.8	1272.9
14°	940.2	1004.4	1068.6	1118.4	1153.9	1189.3	1224.8	1260.2
14.5°	912.8	979.9	1047.0	1099.2	1136.5	1173.9	1211.2	1248.5
15°	887.8	957.3	1026.7	1080.9	1119.6	1158.3	1197.0	1235.8
16°	838.7	911.5	984.3	1041.7	1083.5	1125.5	1167.4	1209.3
17°	790.9	866.5	942.0	1002.2	1046.8	1091.5	1136.1	1180.7
18°	742.8	821.1	899.4	962.2	1009.3	1056.6	1103.8	1151.0
19°	698.7	778.5	858.3	922.9	972.2	1021.6	1070.9	1120.3
20°	656.8	737.7	818.5	884.6	935.6	986.5	1037.5	1088.5
22.5°	563.6	644.1	724.5	791.0	843.7	896.3	948.9	1001.6
25°	483.5	561.0	638.5	704.4	758.6	812.7	866.9	921.0
27.5°	414.6	486.8	559.0	621.7	674.8	727.9	781.0	834.1
30°	357.4	423.2	489.0	547.1	597.5	647.7	698.0	748.3
32.5°	308.1	367.8	427.5	480.4	526.8	573.1	619.3	665.6
35°	265.6	319.3	373.2	420.8	462.1	503.4	544.8	586.1
37.5°	227.5	275.9	324.4	366.9	403.5	440.0	476.5	513.0
40°	194.1	237.2	280.4	318.1	350.1	382.2	414.2	446.2
42.5°	165.0	203.3	241.5	274.7	302.8	330.8	358.9	386.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
45°	140.8	174.4	207.9	237.0	261.5	286.0	310.4	334.9
47.5°	119.9	149.1	178.3	203.6	225.0	246.5	267.9	289.3
50°	102.6	127.9	153.3	175.2	194.0	212.7	231.4	250.1
52.5°	87.5	109.4	131.1	150.4	167.1	183.8	200.5	217.3
55°	74.5	93.3	112.0	129.1	144.5	159.9	175.3	190.8
57.5°	62.7	78.7	94.8	110.0	124.3	138.7	153.0	167.5
60°	52.3	65.7	79.2	92.6	106.3	120.0	133.7	147.3
62.5°	43.0	54.3	65.4	77.6	90.8	104.0	117.2	130.4
65°	34.9	43.8	52.8	63.5	76.0	88.4	100.9	113.4
67.5°	27.5	34.2	41.1	50.5	62.2	74.0	85.7	97.5
70°	21.2	26.5	31.8	39.5	49.8	60.1	70.3	80.6
72.5°	16.2	20.1	24.1	30.0	38.2	46.3	54.4	62.5
75°	12.1	14.6	17.3	21.6	27.9	34.1	40.4	46.6
77.5°	8.6	10.3	11.9	14.8	19.1	23.3	27.6	31.8
80°	5.4	6.1	7.0	8.8	11.7	14.5	17.3	20.1
82.5°	3.4	3.7	4.0	5.0	6.4	7.7	9.2	10.6
85°	1.8	1.9	2.0	2.4	3.2	3.9	4.6	5.3
87.5°	0.8	0.7	0.6	0.6	0.7	0.8	1.0	1.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)