

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: P273381

Luminaire Tested: **0.03-5W-835-25-ID-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273381
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (ITL89170-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-835-25-ID-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES .75 LINEAR LED LUMINAIRE, 25 DEGREE OPTIC.
VERY HIGH OUTPUT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1057.3 lumens
Efficiency: N/A
Efficacy: 57.8 lumens/watt
Spacing Criteria (0/90/45): 0.49 / 1.12 / 0.73
Luminous Opening: Rectangular (W 2.92' x L: 0.05' x H: 0')
CIE Type: Direct

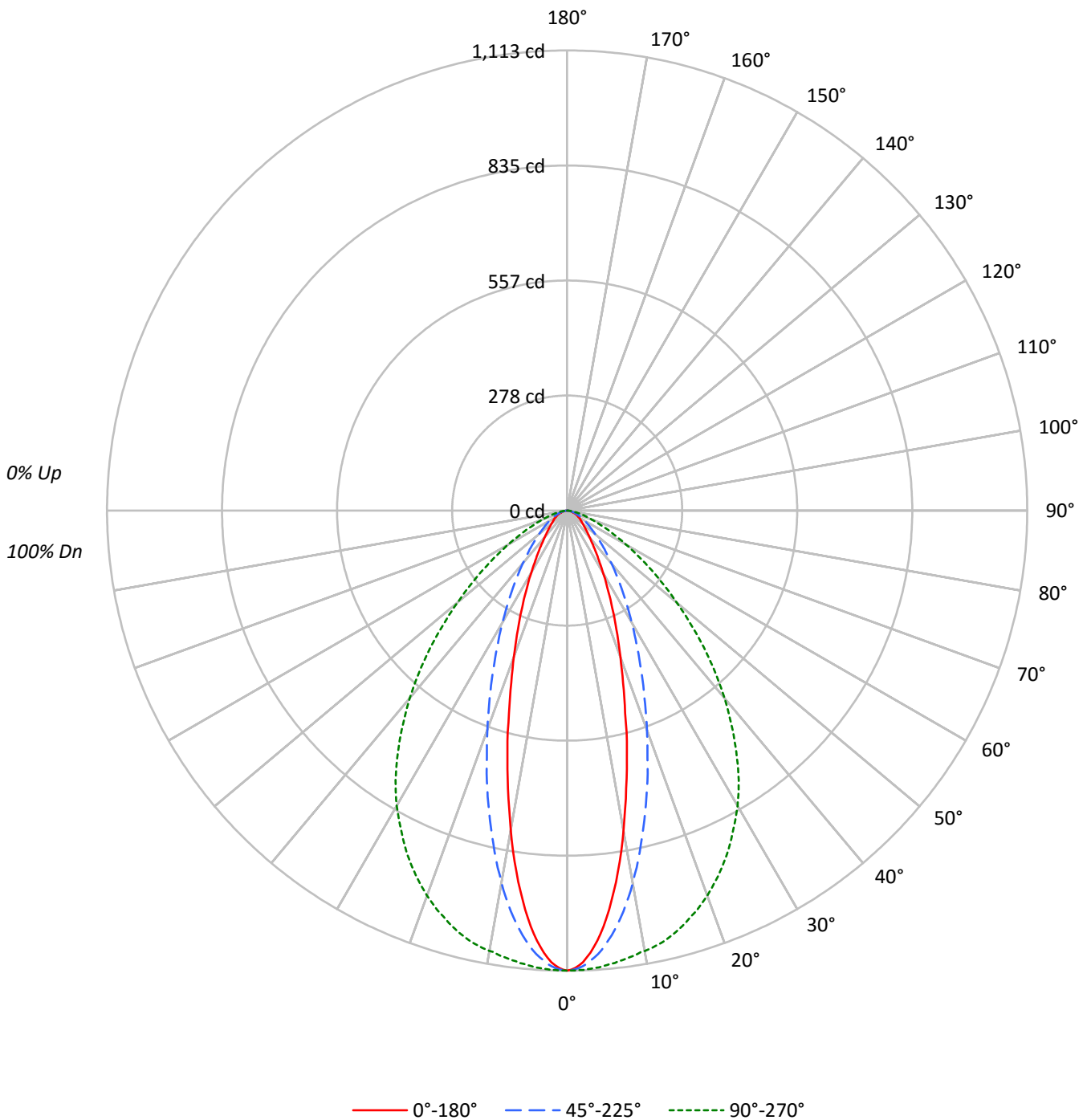
Input Watts (W): 18.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90					90			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80					80			
3	98	89	83	78	95	88	82	78	85	80	76	83	79	75	80	77	74	72					72			
4	91	82	75	70	89	81	74	69	78	73	69	76	72	68	74	70	67	65					65			
5	86	75	68	63	84	74	68	63	72	67	62	71	66	61	69	64	61	59					59			
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	60	56	54					54			
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	51	50					50			
8	72	60	53	48	70	60	53	48	59	52	48	57	52	48	56	51	48	46					46			
9	68	56	50	45	66	56	49	45	55	49	45	54	48	45	53	48	44	43					43			
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	41	40					40			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	87603	87603	87603
5°	79798	83417	87195
10°	62765	73078	86460
15°	45261	60006	85355
20°	31536	47220	83029
25°	22317	36589	79581
30°	15791	28364	74964
35°	11389	21990	68566
40°	8654	17102	60812
45°	7059	13550	51985
50°	5989	10827	42416
55°	5422	8991	33684
60°	5070	7527	25871
65°	4844	6595	19561
70°	4305	5755	14594
75°	4107	5050	11073
80°	3310	4262	8478
85°	2800	2800	5601



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.4	9.1
10°-20°	213.5	20.2
20°-30°	230.6	21.8
30°-40°	197.8	18.7
40°-50°	146.2	13.8
50°-60°	93.4	8.8
60°-70°	51.6	4.9
70°-80°	22.7	2.1
80°-90°	4.9	0.5
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°	540.6	51.1
0°-40°	738.4	69.8
0°-60°	978.1	92.5
0°-90°	1057.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1057.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1113	1113	1113	1113	1113	
5°	1010	1022	1056	1088	1103	89
15°	555	603	736	933	1047	153
25°	257	297	421	700	916	119
35°	118	143	229	476	713	76
45°	63	74	122	295	467	50
55°	40	44	66	162	245	36
65°	26	26	35	77	105	26
75°	14	14	17	29	36	14
85°	3	3	3	5	6	4
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°	1112.7	1112.7	1112.7	1112.7	1112.7	1112.7	1112.7	1112.7	1112.7	1112.7	1112.7
0.5°	1110.6	1110.8	1111.0	1111.3	1111.5	1111.6	1111.6	1111.6	1111.6	1111.6	1111.9
1°	1106.4	1106.7	1106.9	1107.2	1107.4	1107.7	1108.2	1108.6	1109.2	1109.6	1110.0
1.5°	1100.2	1100.6	1101.1	1101.6	1102.1	1102.7	1103.6	1104.6	1105.5	1106.4	1107.2
2°	1092.9	1093.3	1093.9	1094.3	1094.8	1095.8	1097.4	1099.1	1100.6	1102.3	1103.4
2.5°	1082.5	1083.5	1084.4	1085.3	1086.3	1087.8	1090.1	1092.5	1094.8	1097.1	1099.2
3°	1071.1	1072.2	1073.4	1074.5	1075.7	1077.7	1080.8	1083.8	1086.8	1089.8	1092.8
3.5°	1057.6	1059.2	1060.8	1062.5	1064.0	1066.8	1070.8	1074.6	1078.6	1082.5	1086.5
4°	1043.0	1044.9	1046.8	1048.5	1050.4	1054.0	1059.3	1064.6	1069.9	1075.3	1080.1
4.5°	1027.4	1029.5	1031.6	1033.7	1035.7	1040.0	1046.4	1053.0	1059.4	1065.9	1071.9
5°	1009.7	1012.2	1014.8	1017.3	1019.9	1025.0	1032.6	1040.2	1047.9	1055.5	1062.9
5.5°	991.0	994.0	997.1	1000.1	1003.1	1008.9	1017.7	1026.5	1035.3	1044.1	1053.1
6°	970.2	974.0	977.6	981.3	985.0	992.0	1002.1	1012.2	1022.4	1032.6	1043.0
6.5°	949.4	953.4	957.3	961.2	965.1	973.0	984.8	996.5	1008.4	1020.1	1032.2
7°	927.6	932.0	936.3	940.8	945.2	953.9	967.1	980.3	993.4	1006.6	1020.2
7.5°	905.7	910.6	915.4	920.3	925.2	934.9	949.4	964.0	978.5	993.1	1008.4
8°	881.8	887.1	892.4	897.7	903.0	913.9	930.0	946.2	962.3	978.5	995.6
8.5°	859.0	864.5	870.1	875.6	881.1	892.6	910.2	927.8	945.4	962.9	981.9
9°	835.0	841.1	847.1	853.0	859.1	871.5	890.5	909.5	928.4	947.3	968.4
9.5°	810.1	816.7	823.5	830.1	836.9	850.4	870.7	891.1	911.4	931.7	954.6
10°	785.1	792.3	799.5	806.6	813.8	828.1	849.6	871.1	892.5	914.1	939.2
10.5°	760.2	767.5	774.9	782.3	789.7	804.9	827.8	850.6	873.5	896.4	923.8
11°	735.2	743.7	752.3	760.9	769.4	785.4	809.0	832.6	856.1	879.8	909.1
11.5°	711.3	720.0	728.9	737.6	746.4	763.2	787.9	812.6	837.3	862.1	893.5
12°	687.4	696.4	705.4	714.4	723.5	740.8	766.7	792.6	818.5	844.4	877.9
12.5°	664.5	673.5	682.5	691.5	700.6	718.4	744.9	771.5	798.0	824.6	860.7
13°	641.6	650.9	660.1	669.4	678.6	696.9	724.5	751.9	779.5	807.0	844.8
13.5°	618.7	628.2	637.7	647.1	656.6	675.6	704.0	732.4	760.9	789.3	829.0
14°	596.9	606.4	615.8	625.3	634.8	654.2	683.5	713.0	742.3	771.6	813.0
14.5°	576.1	585.4	594.6	603.9	613.1	632.9	663.1	693.4	723.7	753.9	797.2
15°	555.3	564.8	574.2	583.7	593.2	613.3	644.0	674.8	705.5	736.2	781.1
16°	509.5	520.2	530.8	541.5	552.1	573.3	605.2	637.1	669.0	700.9	748.7
17°	473.2	483.6	494.0	504.3	514.7	536.2	568.5	600.9	633.2	665.5	716.4
18°	437.8	448.0	458.2	468.3	478.5	499.8	532.1	564.5	596.8	629.1	683.0
19°	405.6	415.5	425.4	435.4	445.3	466.5	498.8	531.2	563.5	595.9	652.0
20°	376.4	385.9	395.4	404.8	414.3	435.1	467.2	499.4	531.5	563.6	621.6
22.5°	310.9	319.5	328.0	336.6	345.1	364.9	395.9	426.8	457.8	488.8	550.0
25°	256.9	264.8	272.6	280.5	288.3	306.6	335.2	363.9	392.5	421.2	484.0
27.5°	211.1	218.3	225.4	232.6	239.8	256.6	283.2	309.8	336.3	362.9	425.3
30°	173.7	179.9	186.1	192.4	198.6	214.0	238.4	263.0	287.4	312.0	372.7
32.5°	142.5	148.0	153.6	159.1	164.6	178.6	200.7	222.8	245.1	267.3	325.5
35°	118.5	123.1	127.8	132.4	137.1	149.3	169.2	189.1	208.9	228.8	283.8
37.5°	99.8	103.6	107.2	111.0	114.6	125.2	142.8	160.4	177.9	195.5	246.6
40°	84.2	87.5	90.7	93.9	97.1	106.3	121.4	136.3	151.4	166.4	213.5
42.5°	72.8	75.1	77.4	79.8	82.0	89.7	102.9	116.2	129.3	142.5	185.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
45°	63.4	65.3	67.2	68.9	70.8	77.3	88.4	99.5	110.5	121.7	160.2
47.5°	55.1	56.8	58.3	60.0	61.6	67.0	76.2	85.5	94.7	104.0	138.2
50°	48.9	50.0	51.2	52.3	53.5	57.9	65.5	73.1	80.8	88.4	118.4
52.5°	43.7	44.6	45.5	46.5	47.4	51.0	57.2	63.4	69.7	75.9	101.6
55°	39.5	40.2	40.9	41.6	42.3	45.1	50.2	55.3	60.4	65.5	87.2
57.5°	36.4	36.6	36.8	37.1	37.3	39.5	43.7	47.8	52.0	56.2	74.1
60°	32.2	32.4	32.7	33.0	33.2	34.9	38.2	41.4	44.6	47.8	62.8
62.5°	29.1	29.3	29.5	29.8	30.1	31.4	34.0	36.5	39.1	41.6	53.7
65°	26.0	26.0	26.0	26.0	26.0	27.0	29.1	31.2	33.3	35.4	44.8
67.5°	22.9	22.9	22.9	22.9	22.9	23.7	25.3	26.9	28.5	30.2	37.3
70°	18.7	18.9	19.1	19.4	19.7	20.4	21.5	22.7	23.8	25.0	30.5
72.5°	15.6	15.8	16.0	16.3	16.5	17.1	18.0	18.9	19.9	20.8	24.7
75°	13.5	13.5	13.5	13.5	13.5	13.8	14.6	15.3	15.9	16.6	19.4
77.5°	10.4	10.4	10.4	10.4	10.4	10.6	11.1	11.5	12.1	12.5	14.6
80°	7.3	7.3	7.3	7.3	7.3	7.5	8.0	8.4	8.9	9.4	10.5
82.5°	5.2	5.2	5.2	5.2	5.2	5.3	5.5	5.8	6.0	6.2	7.0
85°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.5
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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°	1112.7	1112.7	1112.7	1112.7	1112.7	1112.7	1112.7	1112.7
0.5°	1112.1	1112.4	1112.6	1112.7	1112.7	1112.7	1112.7	1112.7
1°	1110.5	1110.9	1111.4	1111.8	1112.0	1112.3	1112.5	1112.7
1.5°	1107.8	1108.5	1109.3	1109.8	1110.3	1110.7	1111.2	1111.6
2°	1104.6	1105.7	1106.9	1107.9	1108.8	1109.8	1110.7	1111.6
2.5°	1101.2	1103.3	1105.4	1106.9	1107.8	1108.7	1109.7	1110.6
3°	1095.8	1098.9	1101.9	1104.1	1105.4	1106.8	1108.2	1109.6
3.5°	1090.4	1094.3	1098.2	1101.1	1103.0	1104.8	1106.7	1108.5
4°	1084.9	1089.8	1094.7	1098.2	1100.5	1102.9	1105.2	1107.5
4.5°	1078.0	1083.9	1089.9	1094.3	1097.1	1099.9	1102.6	1105.4
5°	1070.3	1077.6	1085.0	1090.4	1093.7	1096.9	1100.1	1103.3
5.5°	1062.0	1071.1	1080.1	1086.5	1090.1	1093.9	1097.5	1101.2
6°	1053.4	1063.8	1074.2	1081.7	1086.4	1091.0	1095.6	1100.2
6.5°	1044.2	1056.2	1068.2	1076.7	1081.8	1086.9	1092.0	1097.1
7°	1033.9	1047.5	1061.1	1071.1	1077.3	1083.6	1089.8	1096.0
7.5°	1023.6	1038.9	1054.1	1065.2	1072.1	1079.1	1086.0	1092.9
8°	1012.8	1029.8	1047.0	1059.4	1067.2	1075.1	1082.9	1090.9
8.5°	1000.8	1019.8	1038.8	1052.7	1061.7	1070.8	1079.7	1088.8
9°	989.4	1010.5	1031.5	1046.9	1056.5	1066.2	1076.0	1085.7
9.5°	977.5	1000.4	1023.3	1040.0	1050.6	1061.3	1071.9	1082.5
10°	964.4	989.7	1014.8	1033.4	1045.4	1057.5	1069.4	1081.5
10.5°	951.4	978.9	1006.4	1026.7	1039.9	1053.1	1066.2	1079.4
11°	938.4	967.8	997.2	1019.1	1033.7	1048.2	1062.8	1077.3
11.5°	924.9	956.4	987.8	1011.4	1027.1	1042.8	1058.5	1074.2
12°	911.4	945.0	978.4	1003.7	1020.9	1037.9	1055.1	1072.1
12.5°	896.7	932.8	968.9	996.0	1014.2	1032.5	1050.7	1069.0
13°	882.8	920.6	958.6	987.2	1006.6	1026.1	1045.4	1064.9
13.5°	868.7	908.6	948.3	978.4	999.0	1019.5	1040.1	1060.7
14°	854.4	895.7	937.0	968.8	990.7	1012.7	1034.6	1056.5
14.5°	840.3	883.6	926.8	959.9	983.0	1006.2	1029.3	1052.4
15°	825.9	870.7	915.5	950.2	974.4	998.6	1022.9	1047.2
16°	796.6	844.4	892.2	929.7	956.7	983.7	1010.8	1037.8
17°	767.2	818.1	868.9	909.0	938.3	967.7	997.1	1026.4
18°	736.9	790.6	844.5	887.4	919.6	951.7	983.8	1016.0
19°	708.2	764.3	820.5	865.8	900.2	934.7	969.1	1003.5
20°	679.7	737.6	795.6	843.1	880.1	917.1	954.0	991.0
22.5°	611.3	672.5	733.8	785.5	828.1	870.6	913.1	955.7
25°	546.9	609.7	672.6	727.6	774.7	821.8	869.0	916.1
27.5°	487.7	550.1	612.5	668.9	719.3	769.6	820.1	870.4
30°	433.5	494.3	555.1	612.1	665.2	718.4	771.5	824.6
32.5°	383.7	442.0	500.2	556.3	610.4	664.5	718.6	772.6
35°	338.8	393.8	448.8	502.6	555.3	608.0	660.6	713.4
37.5°	297.6	348.7	399.7	450.6	501.2	551.9	602.4	653.1
40°	260.7	307.8	354.9	402.2	449.5	497.0	544.3	591.7
42.5°	228.5	271.4	314.4	357.4	400.4	443.3	486.4	529.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
45°	198.8	237.4	276.0	314.4	352.5	390.7	428.7	466.9
47.5°	172.4	206.6	240.8	274.2	306.8	339.3	372.0	404.5
50°	148.5	178.6	208.6	237.2	264.4	291.8	319.0	346.3
52.5°	127.2	152.9	178.6	202.7	225.3	247.9	270.6	293.3
55°	109.0	130.7	152.4	172.4	190.6	208.9	227.1	245.4
57.5°	92.2	110.2	128.2	144.4	158.8	173.0	187.4	201.7
60°	77.9	92.9	107.9	120.8	131.8	142.6	153.5	164.3
62.5°	65.6	77.7	89.6	99.7	107.8	115.8	124.0	132.1
65°	54.3	63.7	73.2	81.0	87.0	93.0	99.0	105.0
67.5°	44.5	51.7	58.9	64.6	68.9	73.4	77.8	82.2
70°	36.1	41.6	47.1	51.4	54.4	57.4	60.4	63.4
72.5°	28.7	32.5	36.5	39.6	41.9	44.3	46.6	48.9
75°	22.1	25.0	27.8	29.9	31.5	33.2	34.7	36.4
77.5°	16.6	18.7	20.8	22.3	23.2	24.1	25.1	26.0
80°	11.6	12.8	13.9	15.0	15.9	16.8	17.8	18.7
82.5°	7.6	8.3	9.0	9.6	10.1	10.5	11.0	11.4
85°	4.1	4.5	5.0	5.3	5.5	5.8	6.0	6.2
87.5°	1.0	1.0	1.0	1.1	1.4	1.7	1.9	2.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)