

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: INVUE

Report Number: P401580

Luminaire Tested: **ENT-SA1D-830-U-SL4**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401580
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-5)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1D-830-U-SL4
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4254 lumens
Efficiency: N/A
Efficacy: 98.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G1

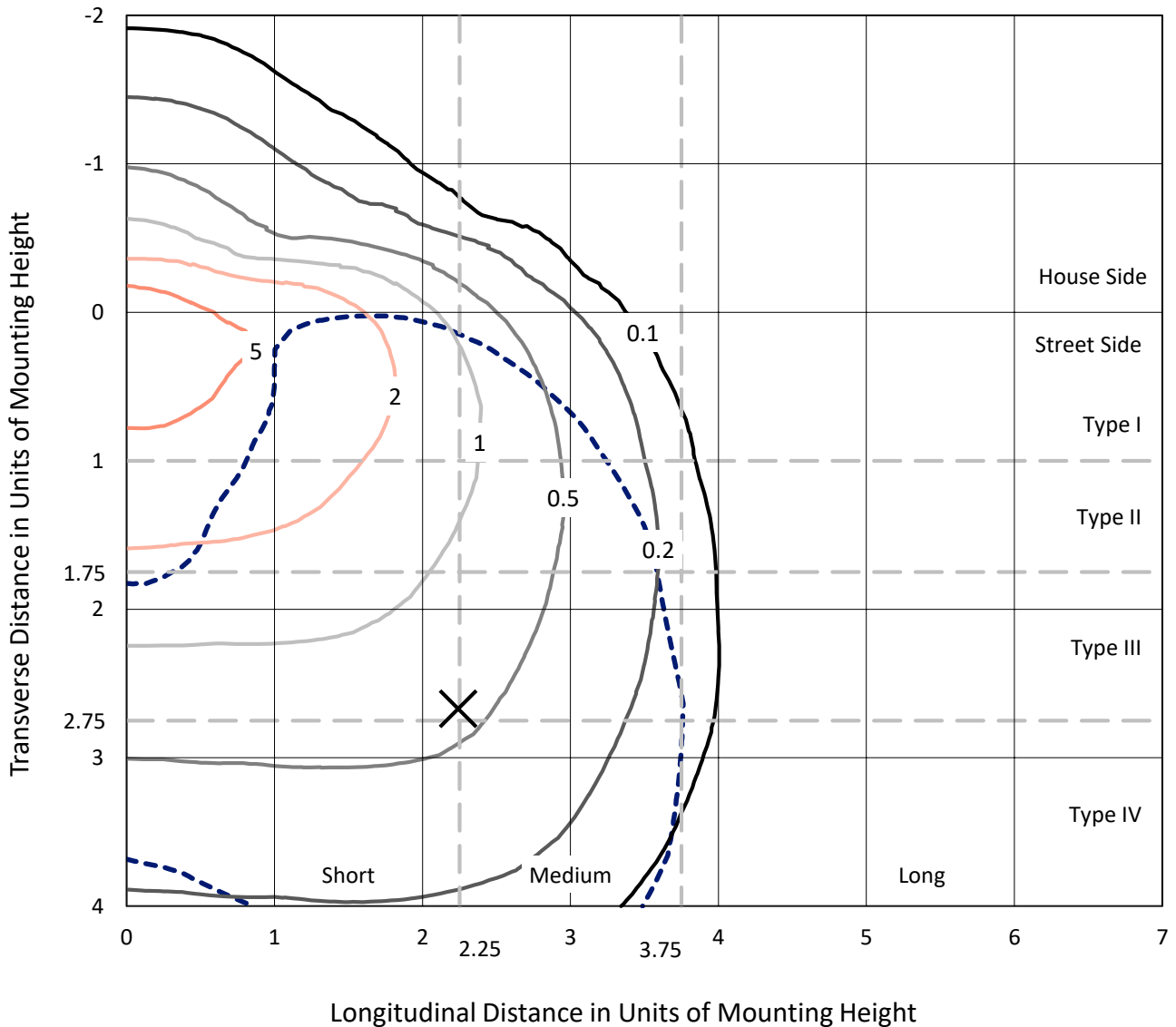
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P401580
 CATALOG NUMBER: ENT-SA1D-830-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

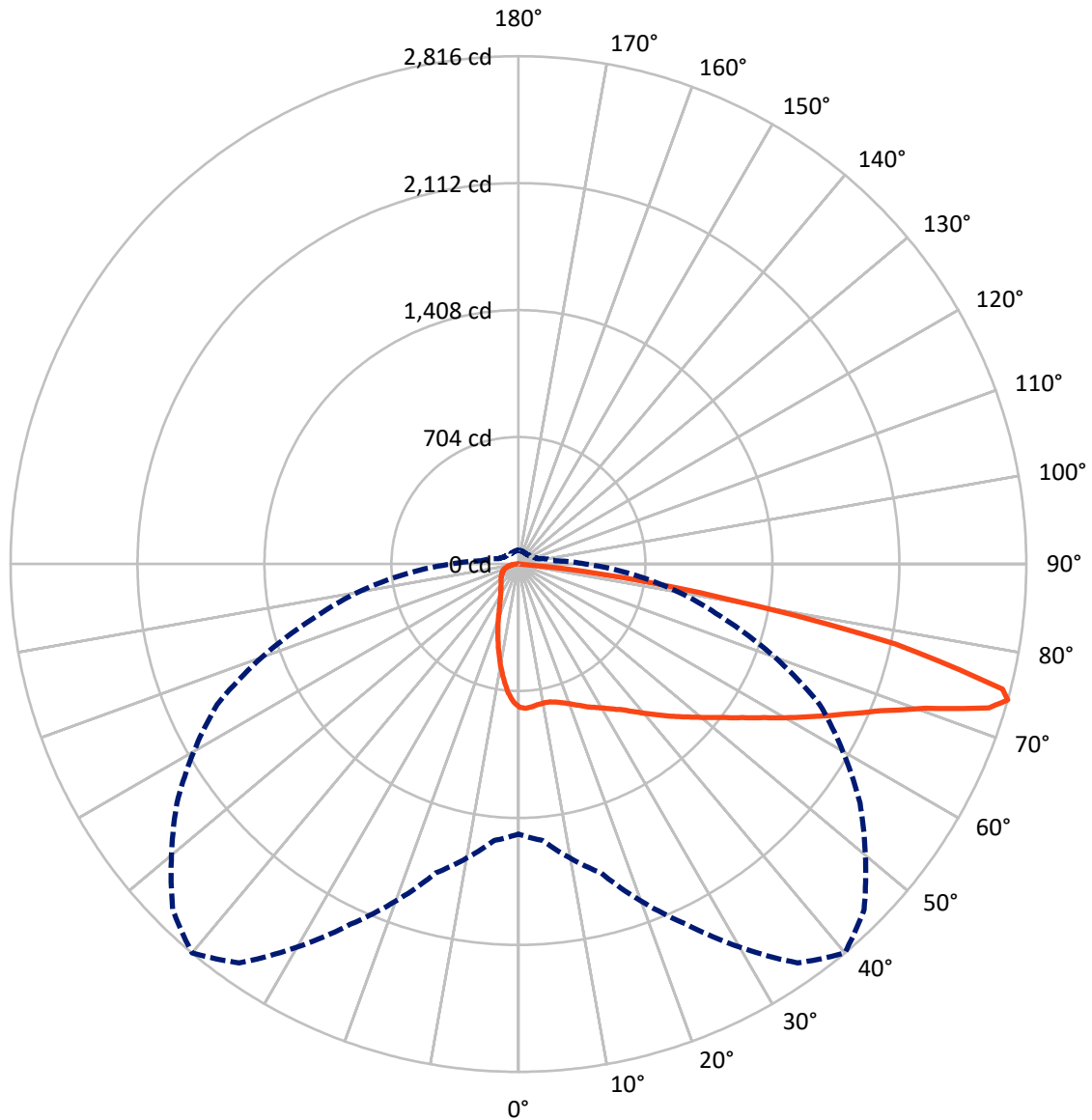


Based on 10 foot mounting height. Maximum calculated value = 7.9 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P401580

CATALOG NUMBER: ENT-SA1D-830-U-SL4

Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 74-Deg Vertical

REPORT NUMBER: P401580

CATALOG NUMBER: ENT-SA1D-830-U-SL4

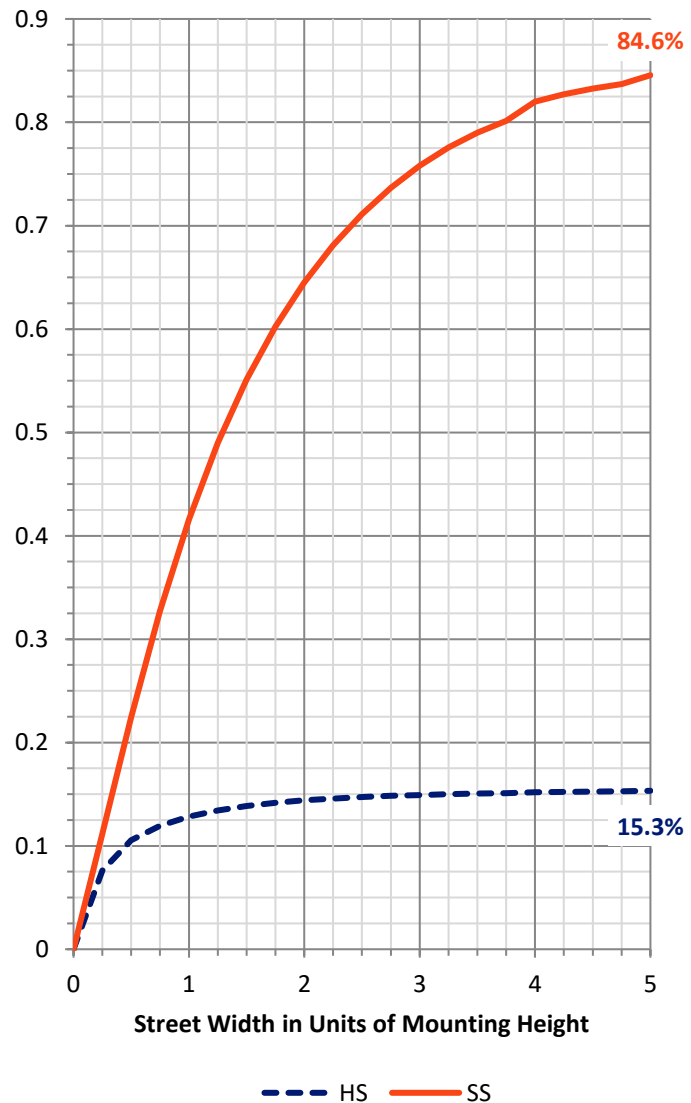
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	663.3	0.0	663.3
	% Fixture	15.6	0.0	15.6
Street Side	Lumens	3590.7	0.0	3590.7
	% Fixture	84.4	0.0	84.4
Total	Lumens	4254.0	0.0	4254.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.1	1.6
10°-20°	180.5	4.2
20°-30°	276.9	6.5
30°-40°	399.9	9.4
40°-50°	575.3	13.5
50°-60°	794.4	18.7
60°-70°	1001.5	23.5
70°-80°	868.5	20.4
80°-90°	86.9	2.0
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°-90°	4254.0	100.0
0°-180°	4254.0	100.0



REPORT NUMBER: P401580

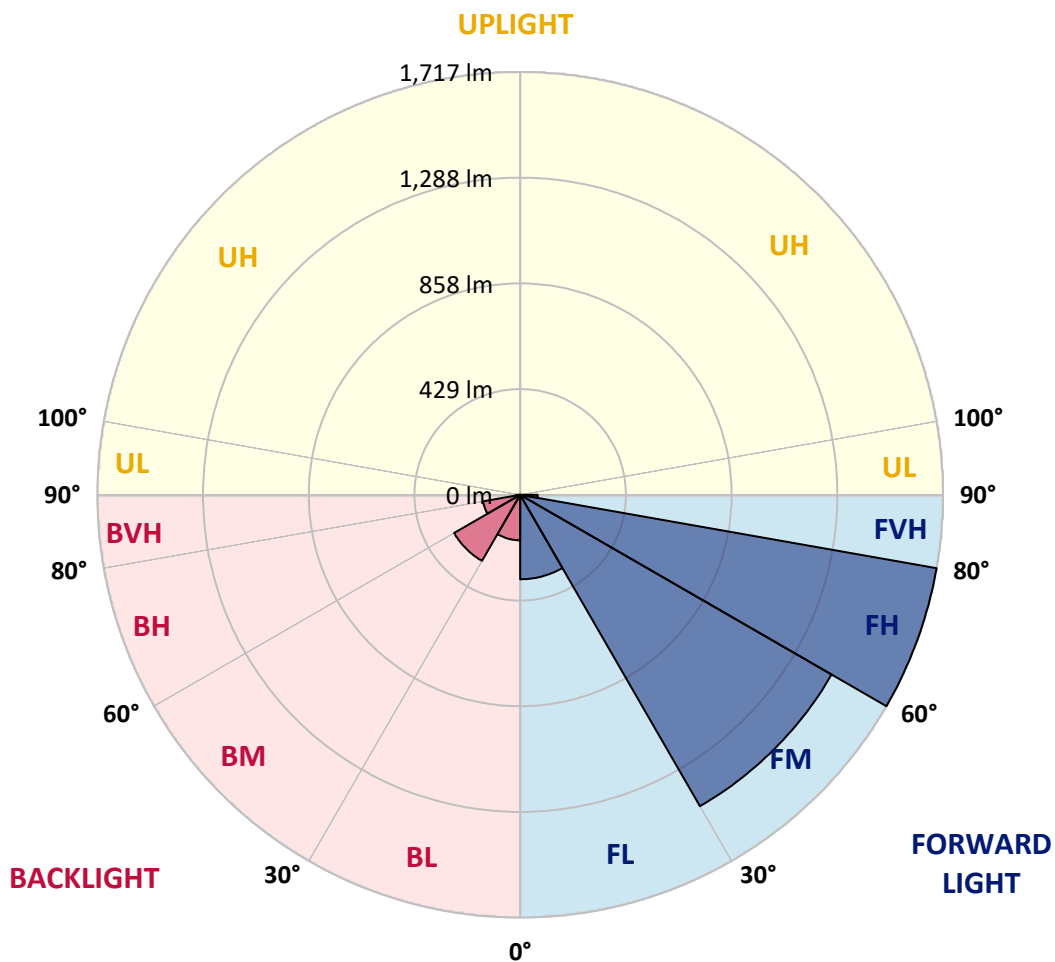
CATALOG NUMBER: ENT-SA1D-830-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	342.9	8.1			
FM	(30°-60°)	1459.8	34.3			
FH	(60°-80°)	1716.9	40.4			G1/1800
FVH	(80°-90°)	71.1	1.7			G1/100
BL	(0°-30°)	184.6	4.3	B1/500		
BM	(30°-60°)	309.8	7.3	B1/1000		
BH	(60°-80°)	153.1	3.6	B1/500		G1/500
BVH	(80°-90°)	15.9	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





REPORT NUMBER: P401580

CATALOG NUMBER: ENT-SA1D-830-U-SL4

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1
2.5°	804.3	803.6	805.5	804.3	802.4	801.1	800.4	796.6	795.3	791.5	786.4
5°	801.1	801.1	801.1	799.8	796.0	794.7	793.4	787.7	783.9	777.5	767.9
7.5°	790.2	792.2	791.5	790.9	787.7	786.4	784.5	777.5	772.4	762.8	750.7
10°	780.0	780.0	780.7	783.2	781.9	782.6	781.9	774.3	767.3	755.2	739.9
12.5°	765.4	767.9	771.7	778.8	781.9	784.5	784.5	778.8	771.1	756.4	738.6
15°	756.4	759.6	769.2	781.9	789.6	794.1	795.3	788.3	778.8	764.1	744.3
17.5°	752.6	756.4	774.3	792.2	805.5	809.4	810.0	802.4	792.2	774.3	751.3
20°	756.4	760.9	784.5	808.7	824.7	827.9	829.1	818.3	805.5	788.3	758.3
22.5°	771.1	777.5	803.6	829.8	846.4	850.8	849.6	834.2	821.5	803.0	767.3
25°	803.0	806.8	830.4	858.5	871.2	876.3	873.2	855.9	839.3	820.9	780.0
27.5°	840.0	845.1	870.0	891.0	899.3	900.6	897.4	879.5	861.0	845.7	799.8
30°	884.6	889.1	909.5	925.5	926.1	926.7	924.8	904.4	889.1	877.0	828.5
32.5°	931.8	932.5	953.5	961.2	956.1	958.0	956.1	933.7	922.9	919.1	866.1
35°	975.2	975.8	997.5	1000.1	991.8	992.4	996.2	970.1	970.1	979.0	922.3
37.5°	1016.7	1018.6	1037.7	1035.2	1032.0	1037.7	1042.8	1020.5	1033.2	1058.8	990.5
40°	1047.9	1052.4	1077.9	1076.6	1083.6	1089.4	1093.8	1082.4	1102.8	1152.5	1074.7
42.5°	1068.3	1077.2	1113.6	1122.5	1134.7	1144.9	1152.5	1151.9	1187.6	1256.5	1164.0
45°	1089.4	1098.3	1146.8	1168.5	1188.9	1204.8	1219.5	1227.1	1283.9	1366.2	1268.0
47.5°	1114.9	1122.5	1176.7	1219.5	1245.6	1267.3	1293.5	1310.0	1382.1	1477.8	1364.3
50°	1153.8	1158.9	1207.4	1273.7	1306.9	1336.8	1369.4	1403.2	1488.0	1592.0	1448.4
52.5°	1204.2	1207.4	1243.1	1328.5	1381.5	1413.4	1461.8	1506.5	1595.8	1695.3	1517.3
55°	1261.6	1259.0	1286.4	1394.2	1456.1	1503.9	1563.9	1609.2	1709.3	1785.2	1572.2
57.5°	1319.0	1317.1	1338.7	1457.4	1550.5	1606.6	1668.5	1716.3	1813.3	1869.4	1611.7
60°	1373.8	1366.8	1397.4	1531.4	1664.7	1729.1	1784.6	1828.6	1911.5	1930.0	1632.8
62.5°	1422.3	1422.3	1466.9	1622.6	1801.2	1859.2	1903.2	1932.5	2005.3	1974.6	1624.5
65°	1466.9	1472.7	1536.5	1724.6	1942.7	2002.1	2040.3	2051.8	2098.4	1976.5	1554.3
67.5°	1517.3	1526.3	1616.2	1843.9	2106.0	2169.2	2202.3	2198.5	2164.7	1947.2	1403.8
70°	1566.4	1581.1	1715.1	1997.6	2307.6	2393.0	2429.4	2354.1	2199.1	1784.6	1165.9
72.5°	1602.2	1627.0	1796.1	2151.3	2596.5	2727.9	2713.2	2396.9	2037.8	1470.8	882.1
74°	1497.6	1539.0	1773.7	2204.2	2700.5	2815.9	2710.7	2312.0	1843.2	1184.4	625.0
75°	1375.7	1415.9	1660.8	2183.2	2720.2	2771.9	2579.3	2162.8	1653.2	917.8	408.2
77.5°	1018.6	1049.8	1275.6	1721.4	2151.3	2136.0	1920.4	1465.7	814.5	276.8	172.2
80°	449.7	473.2	629.5	866.1	1165.3	1160.8	1081.1	673.5	262.8	144.8	105.2
82.5°	135.9	135.2	181.1	252.6	442.6	450.9	383.3	232.2	125.6	60.0	51.0
85°	0.6	0.6	0.6	0.6	1.9	16.6	14.0	44.6	23.0	10.8	18.5
87.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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



REPORT NUMBER: P401580

CATALOG NUMBER: ENT-SA1D-830-U-SL4

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1
2.5°	783.2	782.6	780.7	776.2	773.0	763.4	766.6	760.3	759.6	758.3	757.7
5°	763.4	760.9	753.2	744.3	734.1	718.2	713.1	703.5	697.8	695.8	697.1
7.5°	743.0	737.3	722.6	703.5	683.1	659.5	642.3	628.9	619.3	616.1	611.7
10°	730.3	720.7	695.8	664.0	630.8	597.6	568.9	549.1	534.5	523.0	523.0
12.5°	725.8	713.1	676.7	630.1	582.3	535.1	493.7	467.5	442.6	430.5	428.6
15°	728.4	710.5	660.8	599.5	535.8	474.5	423.5	385.9	362.3	347.6	352.7
17.5°	730.9	708.6	644.2	567.0	490.5	419.7	360.4	317.6	288.9	281.3	278.1
20°	734.1	704.8	623.1	531.9	443.9	366.7	304.2	260.9	239.2	229.6	229.6
22.5°	738.6	699.7	601.4	493.0	396.1	315.1	257.0	224.5	207.3	201.5	201.5
25°	745.0	696.5	579.1	454.1	350.8	274.3	225.8	200.3	191.3	187.5	186.9
27.5°	757.1	697.1	557.4	414.6	306.1	239.8	203.5	186.9	179.9	177.9	177.3
30°	775.6	703.5	534.5	372.5	266.6	213.7	188.2	176.7	172.2	170.9	170.9
32.5°	801.1	715.0	515.3	334.8	237.3	192.6	175.4	167.7	165.2	163.9	164.6
35°	840.6	734.7	492.4	300.4	209.8	177.9	165.2	159.5	157.5	157.5	158.2
37.5°	892.3	765.4	470.1	268.5	191.3	165.2	155.6	152.4	150.5	151.8	152.4
40°	957.3	801.7	449.0	239.8	176.0	155.0	147.3	144.8	144.1	145.4	146.7
42.5°	1027.5	845.7	429.9	216.2	163.9	146.7	140.3	139.0	138.4	139.0	141.0
45°	1109.1	896.1	413.9	198.4	155.0	139.7	133.9	132.7	132.0	133.3	134.6
47.5°	1184.4	941.4	401.2	186.2	147.3	134.6	128.8	126.9	126.9	126.9	128.2
50°	1245.6	977.1	393.5	177.9	141.0	128.8	123.7	121.8	121.2	120.5	121.2
52.5°	1298.6	1003.9	391.0	172.8	135.9	123.7	118.6	117.4	116.1	114.8	115.4
55°	1333.6	1017.3	385.9	168.4	131.4	118.0	113.5	112.3	111.0	109.1	109.1
57.5°	1354.1	1016.0	374.4	165.8	128.8	112.9	108.4	108.4	107.2	104.0	104.6
60°	1356.0	993.7	346.3	162.6	126.9	107.8	102.7	104.0	104.0	101.4	101.4
62.5°	1323.4	935.0	292.1	154.3	124.4	104.0	98.2	101.4	102.7	100.1	100.1
65°	1223.3	796.6	234.7	142.2	118.0	99.5	93.1	99.5	103.3	101.4	100.8
67.5°	1031.3	630.8	193.9	128.8	111.0	93.8	88.0	96.3	101.4	101.4	100.8
70°	827.9	479.0	159.5	114.2	100.1	86.7	82.3	89.3	93.8	95.0	95.0
72.5°	570.2	292.8	129.5	98.2	88.0	78.4	74.6	79.1	81.6	84.2	83.6
74°	368.0	205.4	113.5	89.3	80.4	72.1	70.2	72.1	73.3	75.9	76.5
75°	246.2	167.7	105.9	82.9	75.9	67.6	66.3	68.2	69.5	71.4	71.4
77.5°	141.6	119.9	85.5	68.9	63.1	58.0	57.4	58.0	60.0	61.9	61.2
80°	98.2	91.2	67.6	53.6	49.7	47.2	47.8	48.5	51.7	52.3	51.7
82.5°	59.3	65.7	47.8	40.2	37.6	37.0	38.9	40.2	42.7	43.4	42.7
85°	23.6	31.3	23.6	22.3	24.9	27.4	30.6	32.5	33.8	33.8	33.8
87.5°	0.0	4.5	5.7	8.9	14.0	16.6	21.7	23.6	24.9	24.2	23.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)