

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: LUMARK

Report Number: P963127

Luminaire Tested: **NAV-SB2D-830-U-AFL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963127
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-15)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-830-U-AFL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15980.8 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G2

Input Watts (W): 147.6
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: 24 FT

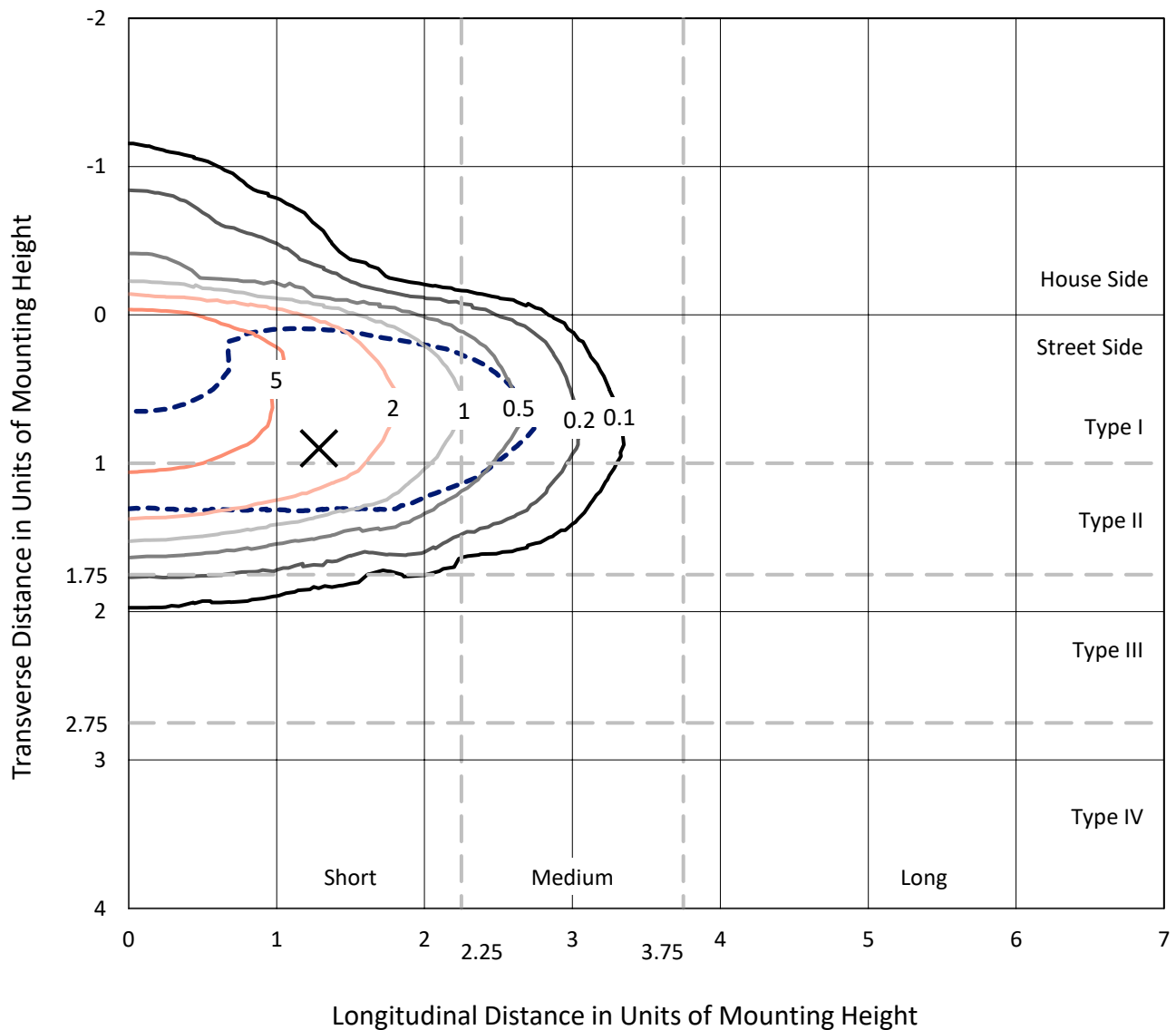


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Iso-Footcandle Lines of Horizontal Illumination

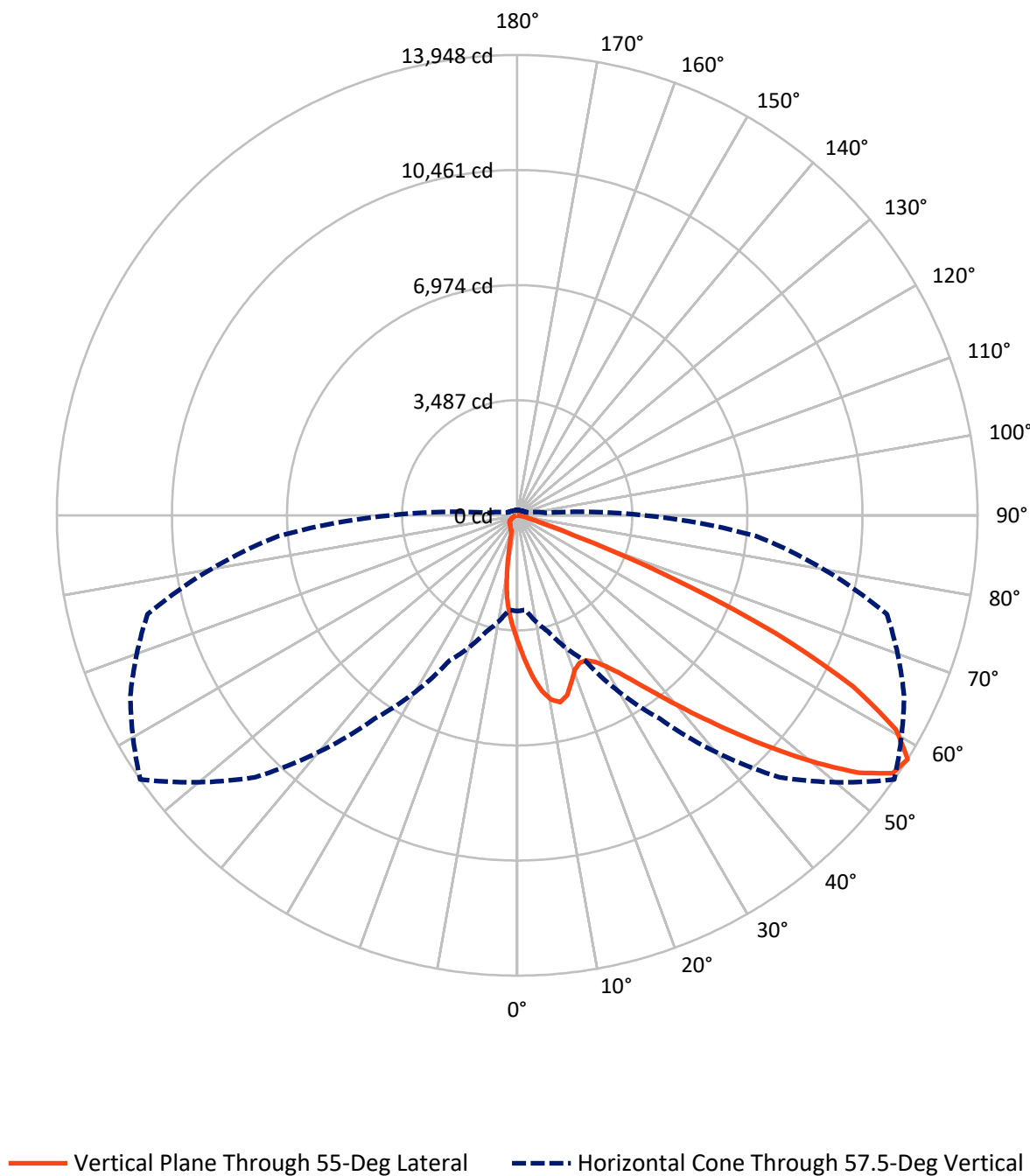
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.8 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1248.0	0.0	1248.0
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	14732.7	0.0	14732.7
	% Fixture	92.2	0.0	92.2
Total	Lumens	15980.8	0.0	15980.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.3	2.2
10°-20°	865.5	5.4
20°-30°	1384.8	8.7
30°-40°	2343.9	14.7
40°-50°	3848.1	24.1
50°-60°	4229.3	26.5
60°-70°	2426.0	15.2
70°-80°	495.7	3.1
80°-90°	29.2	0.2
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°	15980.8	100.0
0°-180°	15980.8	100.0

Coefficient of Utilization



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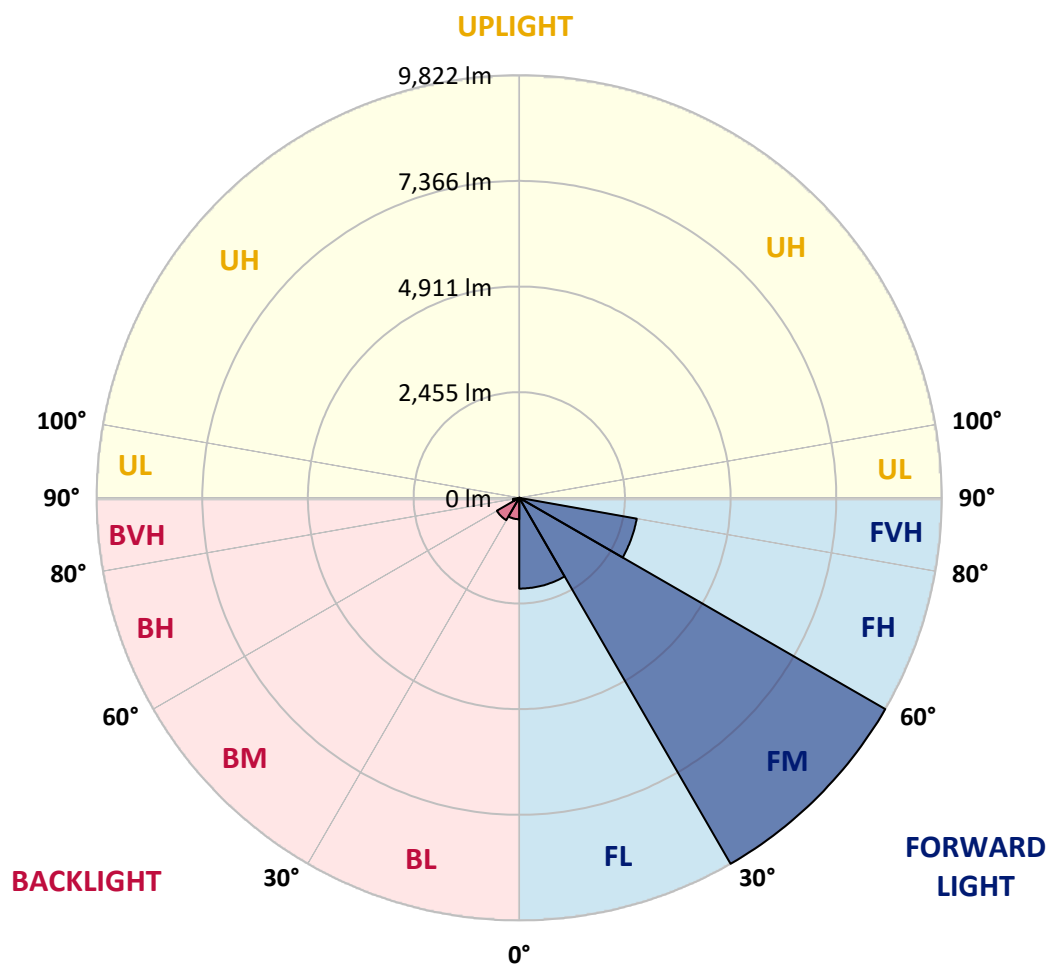
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2110.4	13.2			
FM	(30°-60°)	9821.9	61.5			
FH	(60°-80°)	2773.2	17.4			G2/5000
FVH	(80°-90°)	27.3	0.2			G1/100
BL	(0°-30°)	498.2	3.1	B1/500		
BM	(30°-60°)	599.4	3.8	B1/1000		
BH	(60°-80°)	148.4	0.9	B1/500		G1/500
BVH	(80°-90°)	2.0	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3850.9	3850.9	3850.9	3850.9	3850.9	3850.9	3850.9	3850.9	3850.9	3850.9	3850.9
2.5°	4778.2	4718.2	4709.3	4697.5	4583.1	4497.4	4373.3	4237.2	4084.5	3928.8	3859.8
5°	5520.2	5473.0	5464.1	5408.9	5278.9	5133.0	4912.2	4633.4	4348.6	4013.6	3869.7
7.5°	5664.2	5655.2	5695.6	5693.7	5675.9	5560.6	5374.4	5042.3	4614.7	4118.0	3895.3
10°	5022.6	5045.3	5165.5	5271.0	5555.7	5721.2	5680.9	5407.0	4888.6	4237.2	3923.9
12.5°	4438.2	4411.7	4497.4	4616.6	4947.8	5440.4	5808.0	5711.4	5202.0	4372.2	3966.2
15°	4071.7	4060.8	4109.1	4164.4	4416.6	4913.2	5660.2	5958.7	5503.5	4531.9	4030.3
17.5°	3954.4	3945.5	3960.4	3974.1	4137.7	4522.0	5308.4	6110.5	5792.3	4714.2	4101.2
20°	4050.0	4038.2	4036.2	4025.4	4093.3	4355.5	4990.1	6121.4	6051.4	4879.7	4162.3
22.5°	4328.9	4315.1	4266.8	4223.4	4229.4	4378.2	4848.2	6013.0	6246.5	5034.5	4200.8
25°	4834.4	4811.8	4711.2	4565.3	4472.8	4535.8	4869.9	5870.1	6432.7	5155.6	4182.1
27.5°	5467.0	5437.5	5308.4	5091.6	4879.7	4802.8	5026.6	5771.6	6587.5	5248.3	4141.7
30°	6086.9	6048.4	5921.3	5752.8	5443.4	5201.0	5309.4	5814.9	6771.8	5344.9	4088.4
32.5°	6756.0	6719.5	6551.0	6342.1	6085.8	5759.7	5696.6	6026.8	6997.4	5479.9	4051.0
35°	7602.4	7545.2	7305.8	7021.0	6749.0	6419.0	6220.8	6392.3	7297.9	5685.8	4071.7
37.5°	8566.1	8489.3	8231.2	7838.0	7483.2	7113.7	6859.4	6894.9	7738.4	5961.7	4135.8
40°	9474.7	9404.7	9166.3	8795.7	8350.4	7902.0	7631.0	7552.2	8346.4	6297.7	4248.1
42.5°	10019.6	9956.5	9856.1	9699.4	9323.9	8866.7	8524.7	8354.3	9065.7	6699.8	4385.1
45°	10050.1	9995.0	10130.0	10312.3	10238.4	9933.9	9517.0	9204.7	9788.0	7077.2	4526.9
47.5°	9561.4	9524.0	9933.9	10570.5	10887.8	11015.9	10631.6	9984.1	10384.3	7348.2	4585.1
50°	8229.1	8215.4	9058.8	10227.6	11135.1	11963.8	11807.2	10709.4	10846.3	7488.1	4529.9
52.5°	7135.3	7085.1	7576.8	9129.8	10775.4	12462.5	12956.1	11420.9	11169.6	7514.7	4400.8
55°	5411.9	5367.5	5984.4	7293.0	9615.6	12285.0	13796.7	12155.0	11401.2	7446.7	4169.3
57.5°	2903.0	2875.4	3654.8	4854.1	7516.7	11220.9	13948.4	12931.5	11596.2	7266.4	3845.1
60°	1130.3	1125.3	1417.1	2355.1	4568.3	9128.9	13182.8	13397.6	11718.5	7044.7	3574.1
62.5°	683.9	698.6	746.0	1057.4	2018.1	5671.0	11417.9	12867.4	11800.2	6841.7	3350.4
65°	565.6	566.6	572.6	726.2	966.7	2372.9	8595.8	11123.3	11598.3	6480.0	3033.1
67.5°	484.8	493.6	516.4	576.5	681.9	1040.6	4948.7	8616.4	10369.4	5638.5	2538.4
70°	382.3	394.1	422.7	474.0	526.2	651.4	1828.9	5733.1	7921.7	4250.1	1919.6
72.5°	322.3	321.2	336.0	385.3	417.8	458.2	703.6	3212.5	4603.8	2029.0	950.0
75°	249.3	259.1	277.9	322.3	341.9	332.1	381.4	1173.6	1649.5	614.9	323.2
77.5°	195.2	203.0	219.8	263.1	282.8	235.5	219.8	419.7	530.1	220.7	145.9
80°	87.7	94.6	149.8	194.1	230.6	162.6	119.2	214.8	235.5	100.6	73.9
82.5°	15.8	26.6	87.7	102.5	118.3	105.5	62.1	111.3	115.3	40.4	25.6
85°	1.0	1.9	30.5	37.4	47.3	34.4	18.8	44.4	38.4	13.8	9.8
87.5°	0.0	0.0	0.0	1.0	1.0	4.9	5.9	7.9	5.9	4.9	3.9
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3850.9	3850.9	3850.9	3850.9	3850.9	3850.9	3850.9	3850.9	3850.9	3850.9
2.5°	3788.9	3649.0	3513.0	3401.7	3336.6	3226.2	3153.3	3141.5	3111.0	3137.5
5°	3715.9	3465.6	3212.5	2985.8	2799.6	2559.1	2379.7	2303.9	2237.9	2260.5
7.5°	3681.5	3286.4	2892.1	2504.9	2106.8	1722.5	1436.7	1317.5	1226.8	1239.6
10°	3635.2	3100.1	2482.2	1891.0	1357.9	978.5	781.5	708.5	668.1	669.1
12.5°	3599.7	2877.4	2006.3	1282.0	826.8	624.7	563.6	545.9	534.1	535.0
15°	3582.0	2615.3	1536.3	854.3	591.2	529.2	514.3	506.5	498.7	497.6
17.5°	3552.4	2323.6	1124.3	623.7	517.3	495.7	482.9	474.0	464.1	462.2
20°	3508.1	1992.5	821.8	527.2	484.8	468.1	450.3	438.5	426.7	424.8
22.5°	3426.3	1642.7	631.6	487.8	461.1	442.5	420.8	406.9	395.1	393.2
25°	3274.5	1314.6	532.1	463.1	440.4	417.8	394.1	375.5	364.6	362.6
27.5°	3082.4	1032.7	482.9	440.4	413.9	393.2	366.5	348.8	339.0	337.0
30°	2855.8	795.2	454.3	414.8	382.3	364.6	340.9	326.2	320.2	320.2
32.5°	2611.3	635.6	442.5	389.2	354.8	335.1	316.3	310.4	308.4	307.4
35°	2381.7	551.9	436.5	368.6	330.2	311.4	303.5	304.5	308.4	308.4
37.5°	2177.7	525.2	433.6	353.7	308.4	291.7	296.6	305.4	301.6	301.6
40°	1993.5	528.2	431.6	343.0	290.7	280.8	290.7	283.8	274.0	273.0
42.5°	1852.6	552.8	427.6	334.0	279.8	273.0	269.1	258.2	257.2	259.1
45°	1750.1	574.5	426.7	330.2	268.0	255.2	250.3	239.4	259.1	264.0
47.5°	1628.9	574.5	426.7	316.3	248.4	243.4	235.5	223.7	243.4	248.4
50°	1472.2	538.0	409.9	300.5	232.6	229.6	215.8	201.0	197.1	200.1
52.5°	1274.2	472.0	367.6	278.9	216.8	210.8	194.1	183.3	180.3	180.3
55°	1048.5	395.1	310.4	247.3	200.1	189.2	177.3	172.4	169.5	167.5
57.5°	852.4	324.2	249.3	219.8	184.3	170.5	166.6	160.6	155.7	152.7
60°	699.7	255.2	205.9	195.2	168.5	155.7	154.7	146.8	134.0	132.0
62.5°	540.0	187.3	173.4	169.5	152.7	141.9	139.9	124.1	104.4	100.6
65°	381.4	145.9	139.9	148.8	136.0	126.2	121.2	97.6	76.9	73.9
67.5°	268.0	122.2	110.4	130.1	118.3	105.5	102.5	82.8	64.1	62.1
70°	191.2	99.5	90.6	111.3	94.6	92.7	86.7	69.0	52.3	50.2
72.5°	135.0	75.8	70.0	96.6	65.1	79.8	70.9	53.2	39.5	37.4
75°	99.5	54.2	49.3	56.2	47.3	60.1	50.2	35.5	24.6	23.7
77.5°	72.9	34.4	29.5	27.6	27.6	37.4	27.6	14.8	10.9	9.8
80°	51.2	15.8	13.8	11.8	10.9	8.9	3.9	1.9	1.0	1.0
82.5°	30.5	6.9	6.9	4.9	3.0	0.0	0.0	0.0	0.0	0.0
85°	6.9	3.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.0	1.0	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

(END OF REPORT)