

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: P197301

Luminaire Tested: **NAV-AF-03-D-UNV-T3R-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197301
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-T3R-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16492 lumens
Efficiency: N/A
Efficacy: 86.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B2 - U0 - G3

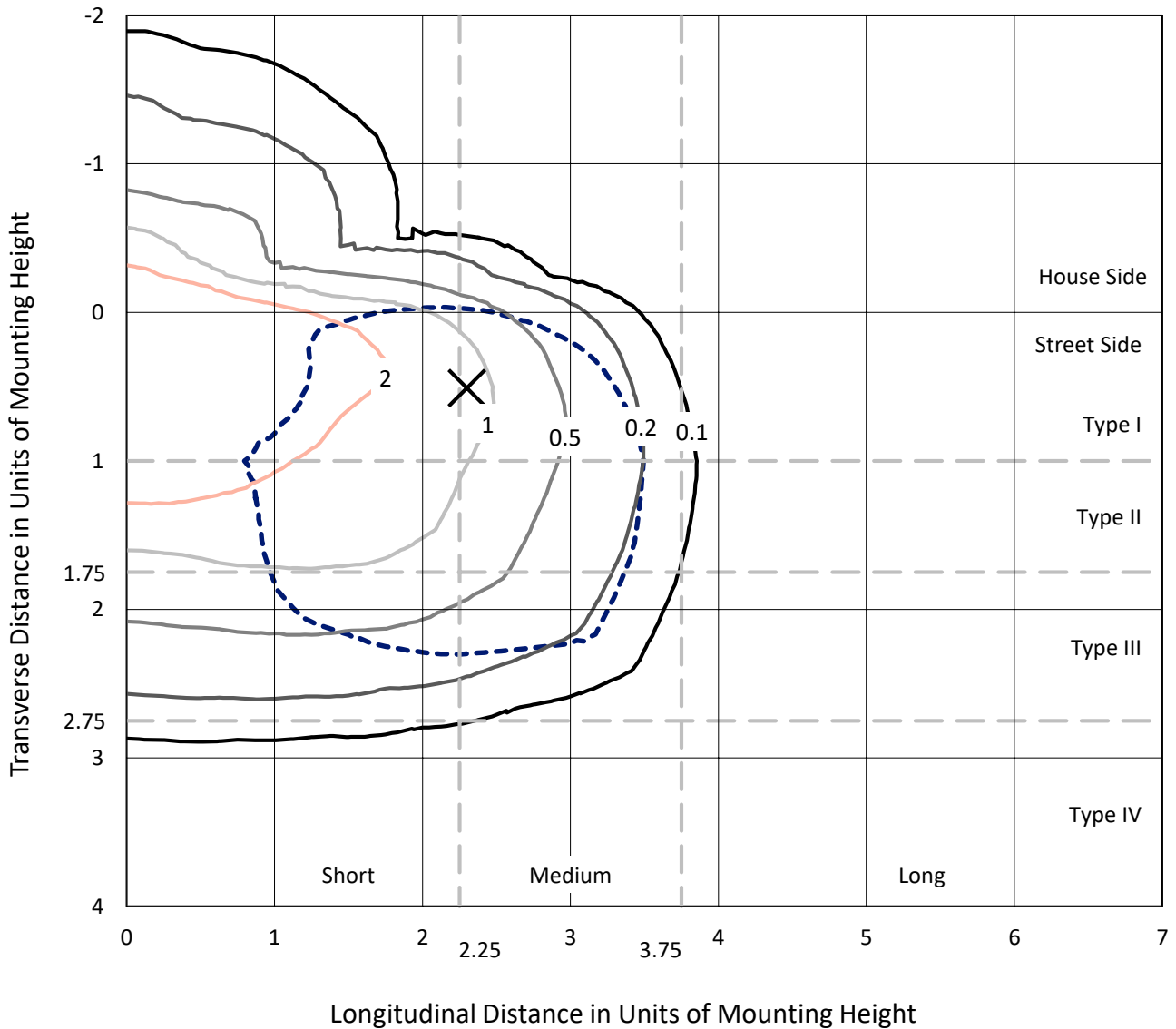
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

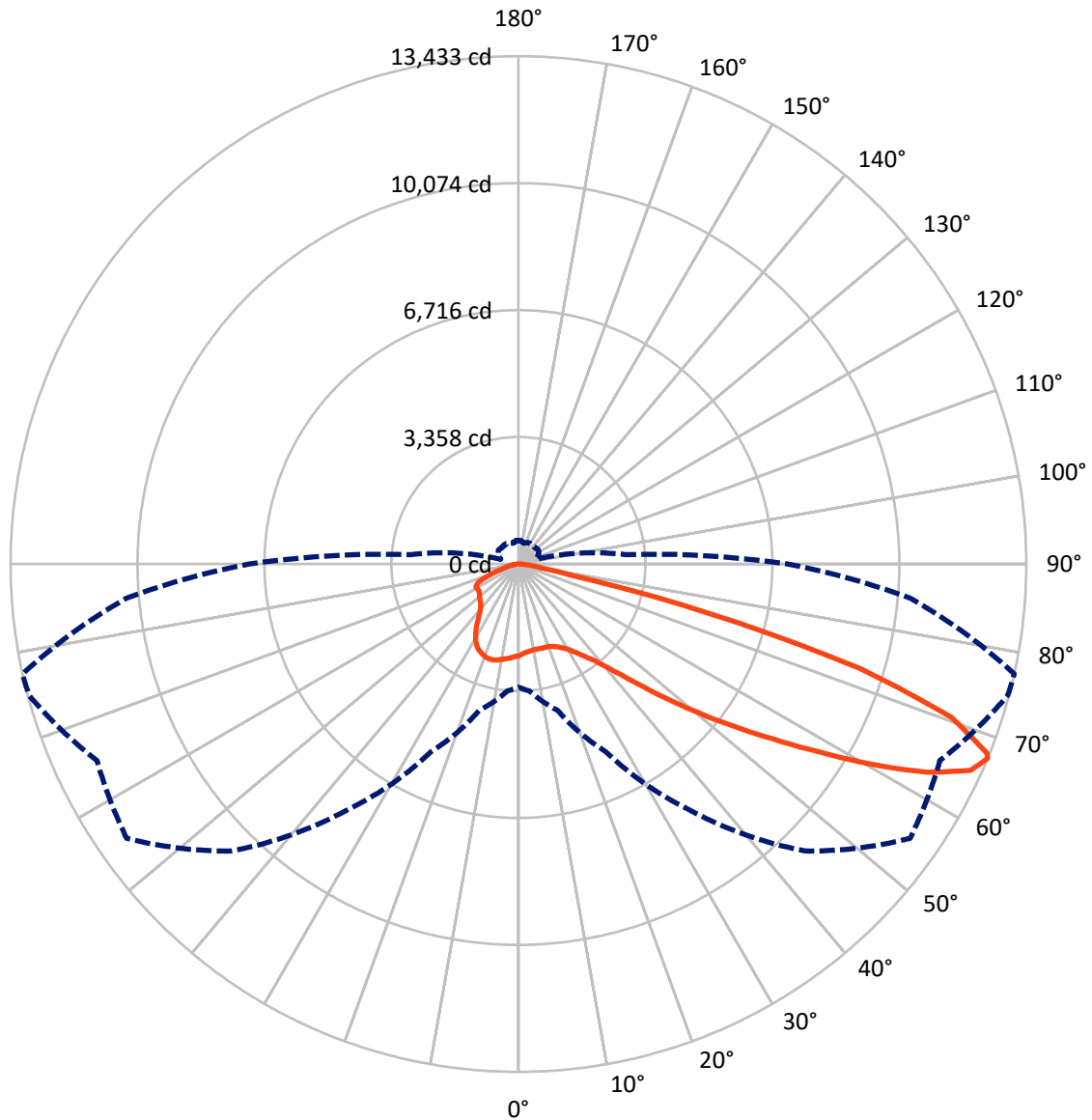
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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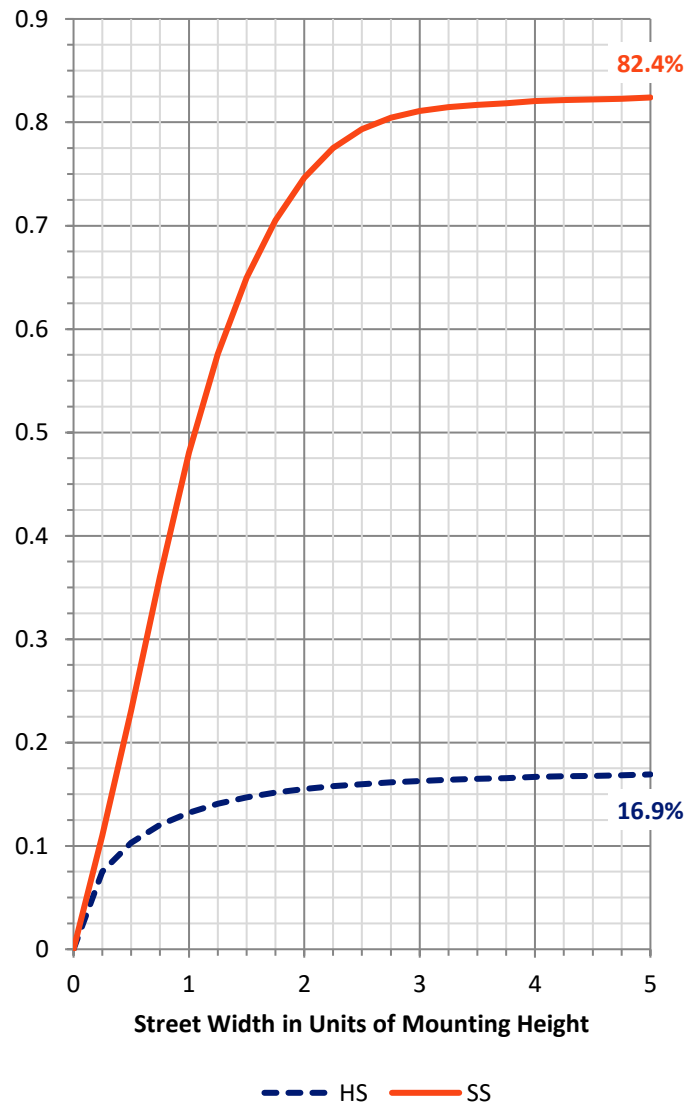
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2834.1	0.0	2834.1
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	13657.9	0.0	13657.9
	% Fixture	82.8	0.0	82.8
Total	Lumens	16492.0	0.0	16492.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.2	1.3
10°-20°	598.7	3.6
20°-30°	1017.2	6.2
30°-40°	1627.3	9.9
40°-50°	2505.2	15.2
50°-60°	3475.7	21.1
60°-70°	4636.4	28.1
70°-80°	2206.4	13.4
80°-90°	208.9	1.3
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°-90°	16492.0	100.0
0°-180°	16492.0	100.0

Coefficient of Utilization



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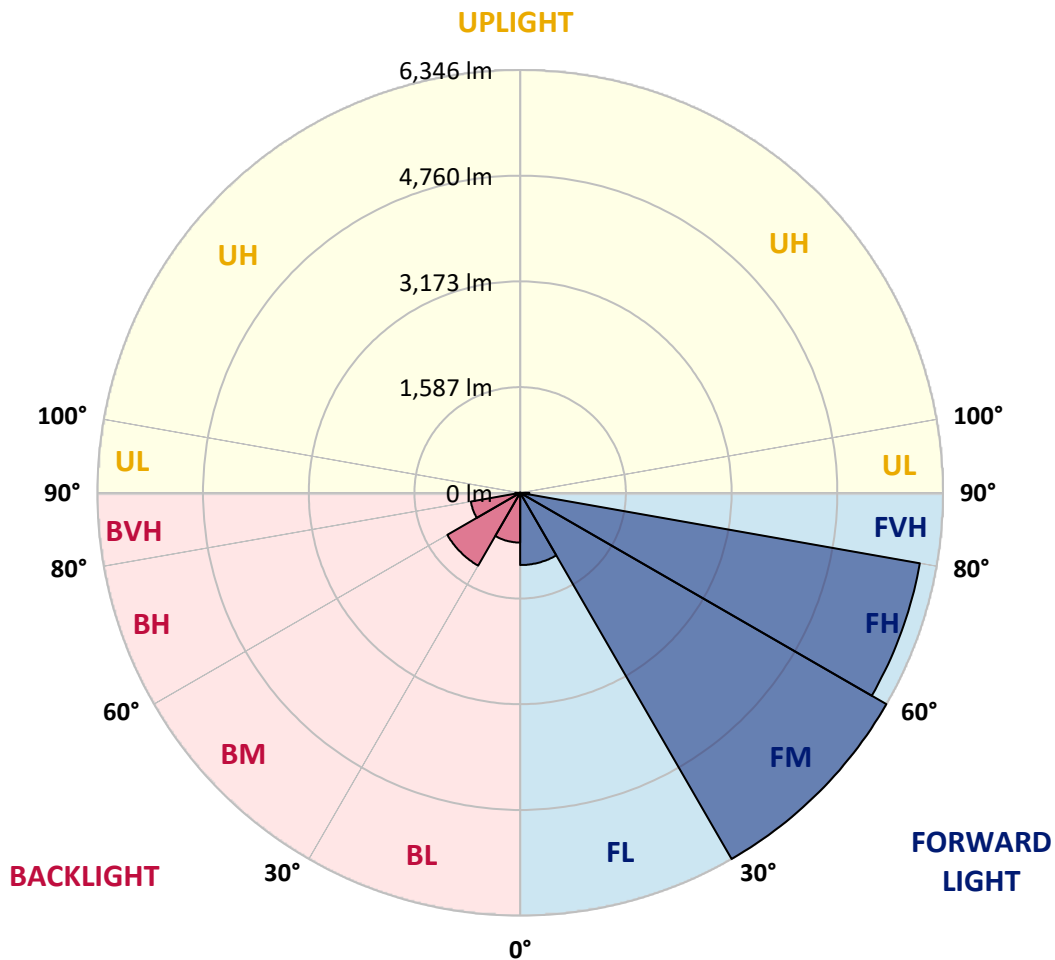
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1084.5	6.6			
FM (30°-60°)	6346.3	38.5			
FH (60°-80°)	6091.4	36.9			G3/7500
FVH (80°-90°)	135.7	0.8			G2/225
BL (0°-30°)	747.5	4.5	B2/1000		
BM (30°-60°)	1261.9	7.7	B2/2500		
BH (60°-80°)	751.5	4.6	B2/1000		G2/1000
BVH (80°-90°)	73.2	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	2427.2	2427.2	2427.2	2427.2	2427.2	2427.2	2427.2	2427.2	2427.2	2427.2	2427.2
2.5°	2176.4	2186.6	2187.6	2217.2	2230.4	2264.1	2300.8	2333.4	2361.9	2372.1	2390.5
5°	1958.3	1958.3	1961.3	1980.7	2018.4	2072.4	2148.9	2232.5	2320.2	2341.6	2395.6
7.5°	1844.1	1846.1	1848.2	1867.5	1897.1	1945.0	2021.5	2135.6	2281.4	2317.1	2411.9
10°	1854.3	1851.2	1841.0	1837.0	1849.2	1879.8	1946.0	2063.3	2248.8	2303.8	2441.5
12.5°	2014.3	2008.2	1974.6	1925.6	1880.8	1869.6	1915.5	2026.6	2233.5	2303.8	2491.4
15°	2288.6	2292.6	2226.4	2124.4	2007.2	1927.7	1921.6	2013.3	2228.4	2310.0	2549.5
17.5°	2645.3	2647.4	2555.6	2407.8	2213.1	2049.0	1963.4	2013.3	2228.4	2316.1	2605.6
20°	3024.6	3010.3	2906.3	2720.8	2468.0	2217.2	2039.8	2025.5	2234.5	2325.2	2658.6
22.5°	3349.7	3336.5	3227.4	3032.7	2743.2	2416.0	2142.8	2066.3	2268.2	2363.0	2733.0
25°	3634.2	3642.3	3536.3	3317.1	3017.4	2640.2	2296.7	2160.1	2338.5	2431.3	2824.8
27.5°	3979.7	3964.4	3842.1	3633.1	3299.8	2872.7	2489.4	2278.4	2422.1	2513.8	2936.9
30°	4379.3	4372.2	4207.1	3992.0	3610.7	3132.6	2680.0	2405.8	2531.2	2627.0	3077.6
32.5°	4864.6	4863.6	4686.2	4422.2	3960.4	3426.2	2905.3	2580.1	2690.2	2787.0	3264.1
35°	5414.0	5413.0	5229.5	4880.9	4363.0	3751.4	3170.3	2792.1	2886.9	2988.9	3486.3
37.5°	5795.3	5789.2	5693.3	5354.9	4808.5	4129.6	3501.6	3077.6	3110.2	3224.4	3754.4
40°	5868.7	5905.4	5987.9	5788.1	5294.8	4549.6	3834.0	3384.4	3415.0	3561.8	4091.9
42.5°	5789.2	5837.1	6111.3	6167.4	5781.0	5058.3	4249.9	3809.5	3848.2	4030.7	4488.4
45°	5719.8	5761.6	6105.2	6377.4	6261.1	5612.8	4768.7	4328.4	4401.8	4628.1	4941.0
47.5°	5601.6	5640.3	5984.9	6415.1	6535.4	6147.0	5393.6	4952.2	5078.6	5352.9	5456.8
50°	5595.5	5612.8	5820.8	6288.7	6630.2	6552.7	6085.8	5682.1	5875.8	6191.8	6027.7
52.5°	5440.5	5561.8	5750.4	6086.8	6632.2	6789.2	6767.8	6482.4	6781.0	7130.7	6653.6
55°	4492.5	4632.1	5516.0	5987.9	6620.0	6992.1	7390.6	7333.6	7800.4	8168.4	7355.0
57.5°	4194.8	4254.0	4839.1	6017.5	6721.9	7327.4	8013.5	8248.0	8966.6	9368.3	8196.0
60°	4113.3	4175.5	4703.5	6031.8	6998.2	7938.1	8858.6	9280.6	10337.7	10763.8	9151.1
62.5°	4022.5	4103.1	4713.7	6045.0	7483.4	8841.2	9979.9	10400.9	11745.5	12125.8	10046.2
65°	3757.5	3864.5	4525.1	5961.4	8014.5	9974.8	11462.1	11569.2	12908.6	13150.2	10586.5
67°	3254.9	3372.2	4007.3	5478.3	7965.6	10738.3	12647.7	12300.1	13403.1	13432.6	10411.1
67.5°	3095.9	3217.2	3831.9	5277.4	7825.9	10838.3	12857.7	12401.0	13399.0	13366.4	10248.0
70°	2084.7	2221.3	2713.6	3874.7	6277.5	10087.0	12806.7	12090.1	12520.3	12146.1	8804.5
72.5°	1034.7	1038.8	1353.8	2122.4	3803.4	7234.7	10683.3	10342.8	10149.1	9442.7	6461.0
75°	498.5	507.7	639.2	937.8	1603.5	3735.1	7285.6	6978.8	5942.1	5144.9	3233.5
77.5°	380.2	389.4	496.4	610.6	668.7	1218.2	3608.7	2916.5	1721.8	1375.2	911.3
80°	293.6	310.9	419.0	468.9	442.4	488.3	1134.6	893.0	669.7	614.7	451.6
82.5°	229.4	239.6	355.8	355.8	305.8	327.2	528.0	515.8	415.9	375.1	242.6
85°	162.1	182.5	286.5	265.0	200.8	202.9	316.0	302.8	214.1	172.3	94.8
87.5°	72.4	92.8	203.9	173.3	107.0	82.6	129.5	111.1	84.6	65.2	43.8
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2427.2	2427.2	2427.2	2427.2	2427.2	2427.2	2427.2	2427.2	2427.2	2427.2	2427.2
2.5°	2410.9	2427.2	2452.7	2468.0	2488.4	2496.5	2504.7	2518.9	2530.1	2527.1	2522.0
5°	2433.3	2460.8	2492.4	2502.6	2502.6	2492.4	2486.3	2487.3	2484.3	2482.2	2476.1
7.5°	2465.9	2503.6	2526.1	2515.9	2484.3	2444.5	2406.8	2384.4	2363.0	2349.7	2353.8
10°	2511.8	2553.6	2554.6	2509.8	2434.3	2347.7	2273.3	2225.3	2179.5	2159.1	2165.2
12.5°	2578.1	2619.9	2584.2	2487.3	2354.8	2219.2	2082.6	1983.8	1895.1	1873.7	1867.5
15°	2649.4	2682.0	2602.5	2439.4	2240.6	2017.4	1788.0	1640.2	1541.3	1524.0	1517.9
17.5°	2711.6	2730.0	2593.4	2353.8	2060.2	1708.5	1441.4	1341.5	1321.1	1331.3	1331.3
20°	2766.6	2760.5	2553.6	2221.3	1775.8	1366.0	1211.0	1210.0	1237.6	1263.0	1265.1
22.5°	2836.0	2788.1	2490.4	2024.5	1436.3	1139.7	1113.2	1139.7	1170.3	1198.8	1201.9
25°	2918.5	2818.6	2405.8	1744.2	1155.0	1034.7	1045.9	1068.3	1087.7	1110.1	1111.1
27.5°	3001.1	2842.1	2286.5	1414.9	1002.1	967.4	979.6	988.8	993.9	1008.2	1008.2
30°	3096.9	2860.4	2114.2	1133.6	931.7	908.3	901.1	897.1	901.1	920.5	921.5
32.5°	3217.2	2893.1	1878.8	972.5	899.1	866.5	829.8	809.4	823.7	858.3	864.5
35°	3353.8	2931.8	1596.4	908.3	887.9	846.1	778.8	747.2	752.3	783.9	789.0
37.5°	3525.1	2981.7	1318.1	893.0	899.1	844.1	755.4	710.5	688.1	689.1	688.1
40°	3744.3	3031.7	1097.9	897.1	923.6	849.2	744.2	673.8	626.9	629.0	633.0
42.5°	3973.6	3064.3	958.2	909.3	953.1	856.3	740.1	638.1	597.4	632.0	663.6
45°	4241.7	3055.1	885.9	920.5	975.6	859.4	724.8	634.1	600.4	704.4	763.5
47.5°	4549.6	3015.4	845.1	925.6	981.7	858.3	713.6	647.3	625.9	806.3	873.6
50°	4883.9	2953.2	812.5	917.5	978.6	854.3	725.8	663.6	636.1	828.8	880.8
52.5°	5249.9	2896.1	778.8	899.1	963.3	842.0	741.1	656.5	607.6	763.5	803.3
55°	5683.1	2882.9	741.1	867.5	937.8	828.8	732.9	634.1	576.0	676.9	701.3
57.5°	6178.6	2965.4	692.2	828.8	903.2	802.3	713.6	621.8	564.7	615.7	629.0
60°	6807.5	3147.9	640.2	788.0	860.4	762.5	696.2	624.9	567.8	606.5	609.6
62.5°	7298.9	3312.0	593.3	738.0	803.3	714.6	677.9	627.9	577.0	618.8	613.7
65°	7477.3	3231.5	535.2	663.6	722.8	661.6	652.4	630.0	577.0	625.9	614.7
67°	7111.3	2847.2	480.1	589.2	646.3	614.7	627.9	621.8	566.8	624.9	605.5
67.5°	6937.0	2711.6	465.9	577.0	625.9	600.4	621.8	617.8	563.7	622.9	600.4
70°	5720.9	1945.0	393.5	484.2	524.0	529.1	584.1	591.3	539.3	585.1	544.4
72.5°	4070.5	1217.2	339.5	375.1	423.1	452.6	533.1	555.6	506.6	508.7	475.0
75°	2014.3	653.4	302.8	289.5	329.3	377.2	464.8	506.6	458.7	424.1	412.9
77.5°	679.9	370.0	255.9	233.4	255.9	302.8	385.3	442.4	404.7	358.8	351.7
80°	351.7	269.1	199.8	187.6	201.8	234.5	301.7	368.0	345.6	347.6	286.5
82.5°	219.2	164.1	143.7	142.7	152.9	179.4	222.2	298.7	296.6	253.8	184.5
85°	101.9	94.8	91.7	94.8	97.9	101.9	144.8	213.1	225.3	136.6	121.3
87.5°	42.8	41.8	36.7	39.8	43.8	42.8	58.1	90.7	126.4	85.6	78.5
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)