



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  
Eaton Lighting Division  
(formerly Cooper Lighting)

Brand: FAIL-SAFE

Report Number: P35490-R3

Luminaire Tested: **FPS-4-LD4-2HI-30-OPL**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Eaton or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P35490-R3  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: EATON (FORMERLY COOPER LIGHTING)  
Product Line: FAIL-SAFE  
Catalog Number: FPS-4-LD4-2HI-30-OPL  
Description: FPS 4' LED FIXTURE WITH OPAL LENS  
Light Source: (168) EATON 3000K CCT, 85 CRI LEDS  
Ballast/Driver: -

| Luminaire Equipment: | <u>Sample No.</u> | <u>Condition</u> | <u>Description</u> |
|----------------------|-------------------|------------------|--------------------|
|                      | a                 | good             | reflector          |
|                      | b                 | good             | lens               |
|                      | c                 | good             | housing            |
|                      | d                 | good             | cord               |

**Summary**

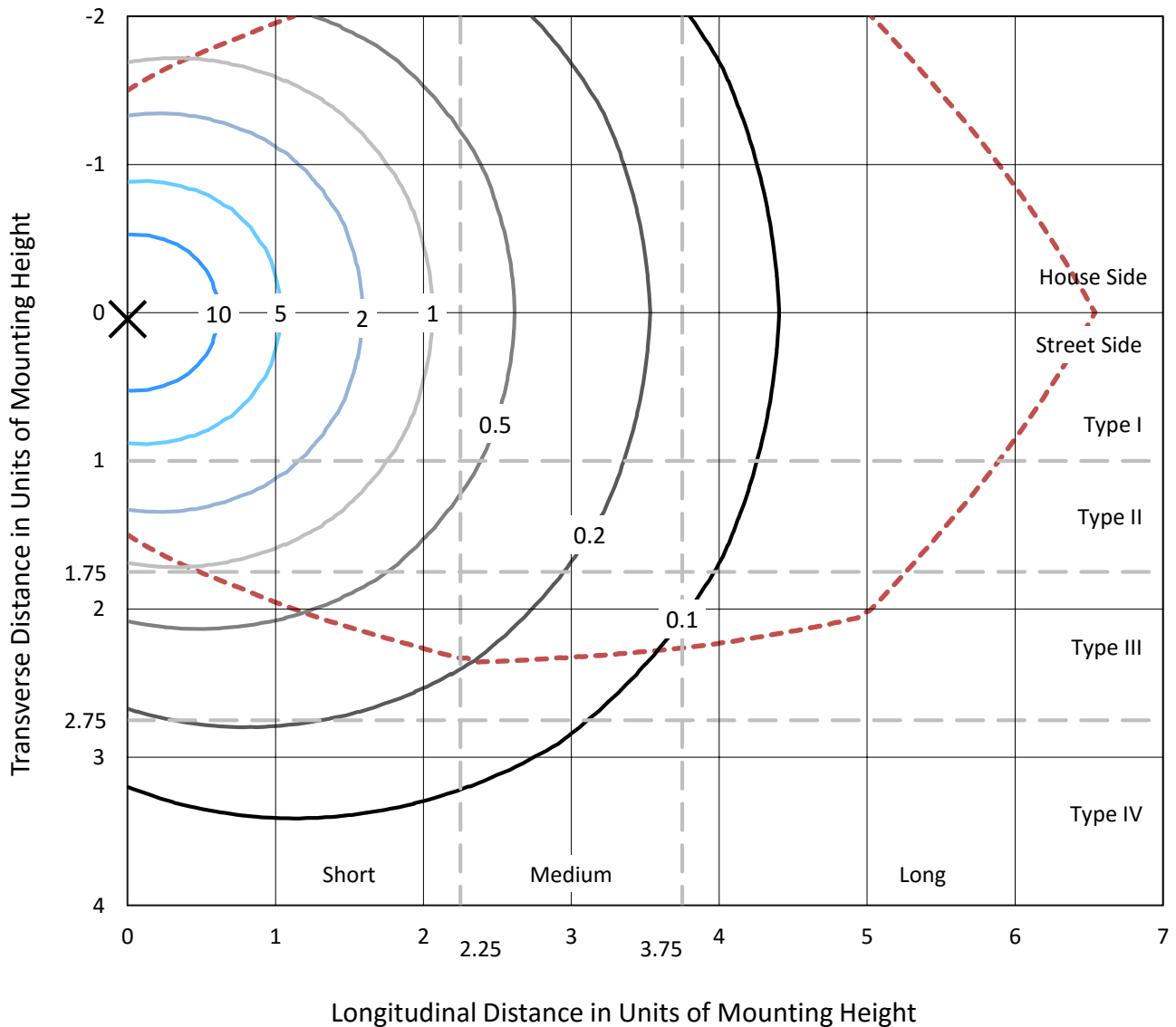
Lumens per Lamp: N/A  
Luminaire Lumens: 8099.3 lumens  
Efficiency: N/A  
Efficacy: 90.8 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.58' x L: 4.1' x H: 0.33')  
IES Classification: Type V - Short - Non-Cutoff  
BUG Rating: B2 - U5 - G3  
  
Input Watts (W): 89.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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: P35490-R3  
 CATALOG NUMBER: FPS-4-LD4-2HI-30-OPL

### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

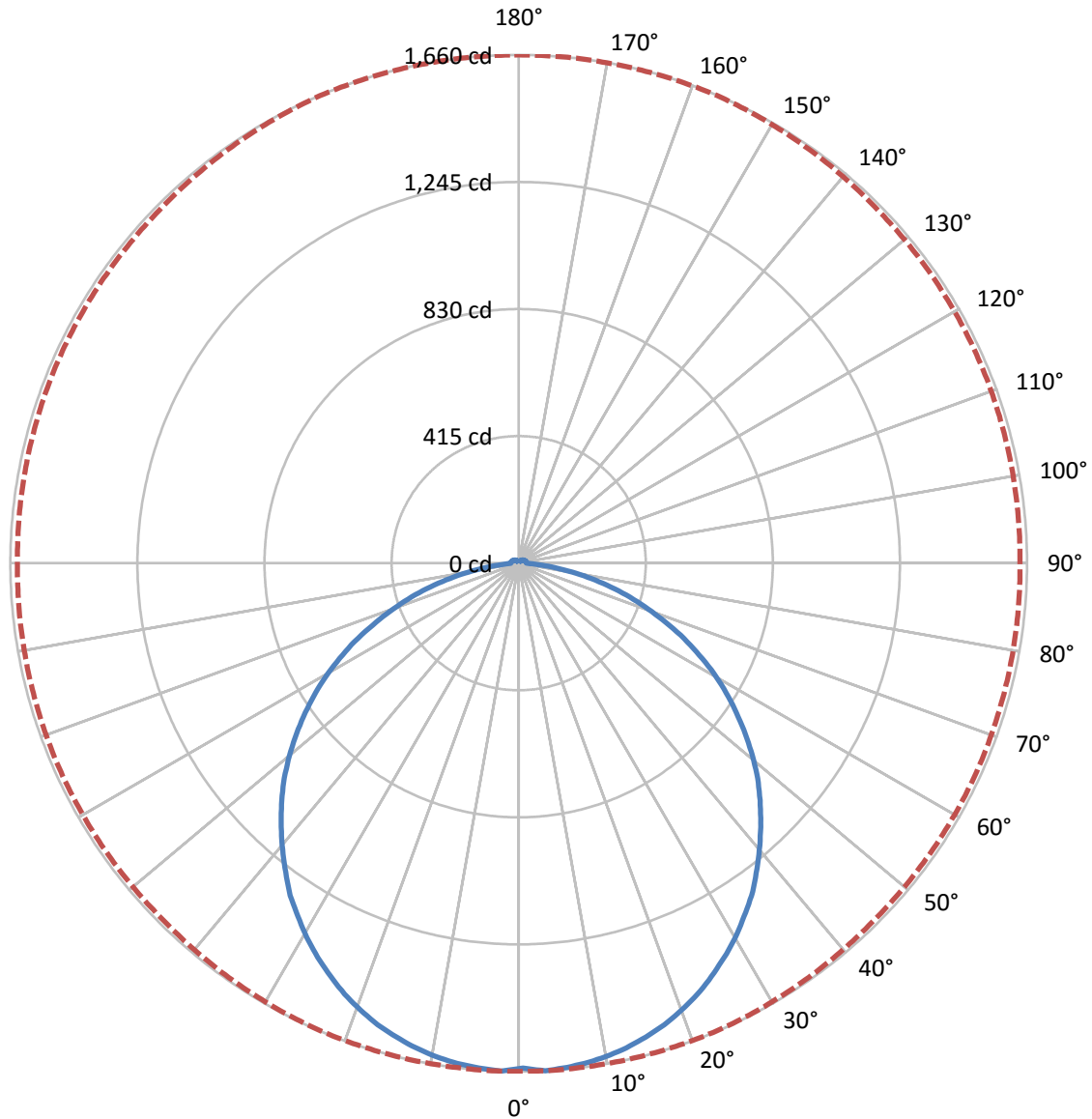


Based on 10 foot mounting height. Maximum calculated value = 16.5 fc  
 Type V - Short - Non-Cutoff



REPORT NUMBER: P35490-R3  
CATALOG NUMBER: FPS-4-LD4-2HI-30-OPL

### Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral      - - - Horizontal Cone Through 2.5-Deg Vertical



REPORT NUMBER: P35490-R3

CATALOG NUMBER: FPS-4-LD4-2HI-30-OPL

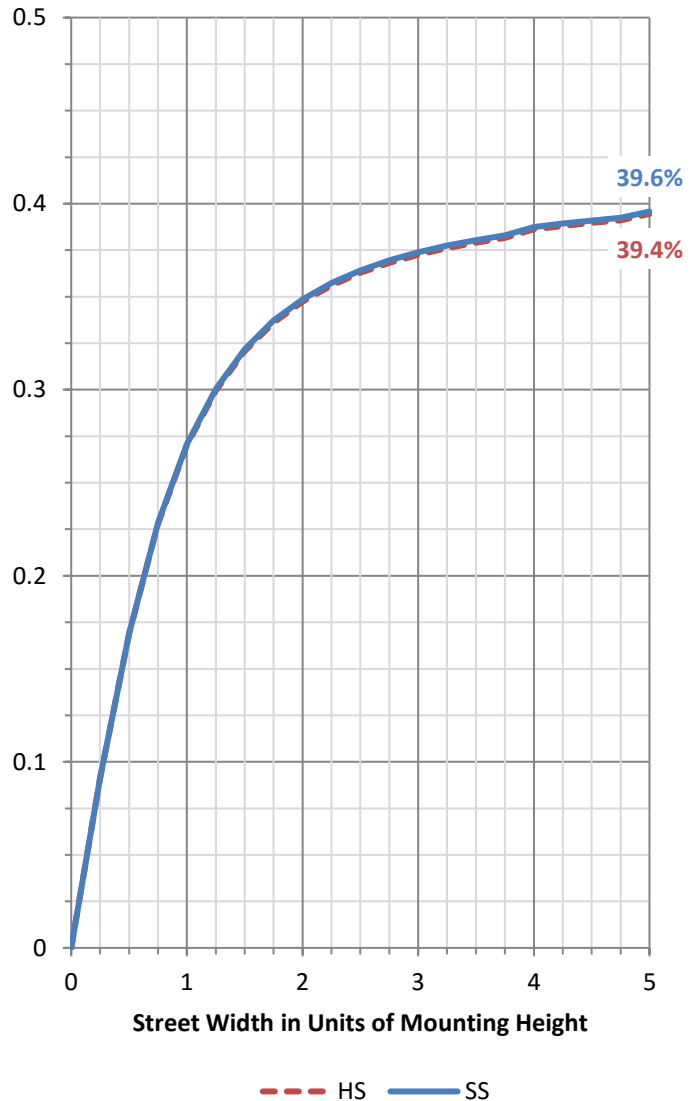
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 3324.9   | 724.8  | 4049.6 |
|                    | % Fixture | 41.1     | 8.9    | 50.0   |
| <b>Street Side</b> | Lumens    | 3324.9   | 724.8  | 4049.6 |
|                    | % Fixture | 41.1     | 8.9    | 50.0   |
| <b>Total</b>       | Lumens    | 6649.7   | 1449.6 | 8099.3 |
|                    | % Fixture | 82.1     | 17.9   | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 157.2  | 1.9       |
| 10°-20°   | 461.5  | 5.7       |
| 20°-30°   | 729.2  | 9.0       |
| 30°-40°   | 928.2  | 11.5      |
| 40°-50°   | 1040.4 | 12.8      |
| 50°-60°   | 1054.2 | 13.0      |
| 60°-70°   | 955.2  | 11.8      |
| 70°-80°   | 769.4  | 9.5       |
| 80°-90°   | 554.1  | 6.8       |
| 90°-100°  | 428.4  | 5.3       |
| 100°-110° | 360.2  | 4.4       |
| 110°-120° | 281.6  | 3.5       |
| 120°-130° | 198.5  | 2.5       |
| 130°-140° | 117.3  | 1.4       |
| 140°-150° | 52.1   | 0.6       |
| 150°-160° | 11.3   | 0.1       |
| 160°-170° | 0.1    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-90°    | 6649.7 | 82.1      |
| 0°-180°   | 8099.3 | 100.0     |





REPORT NUMBER: P35490-R3

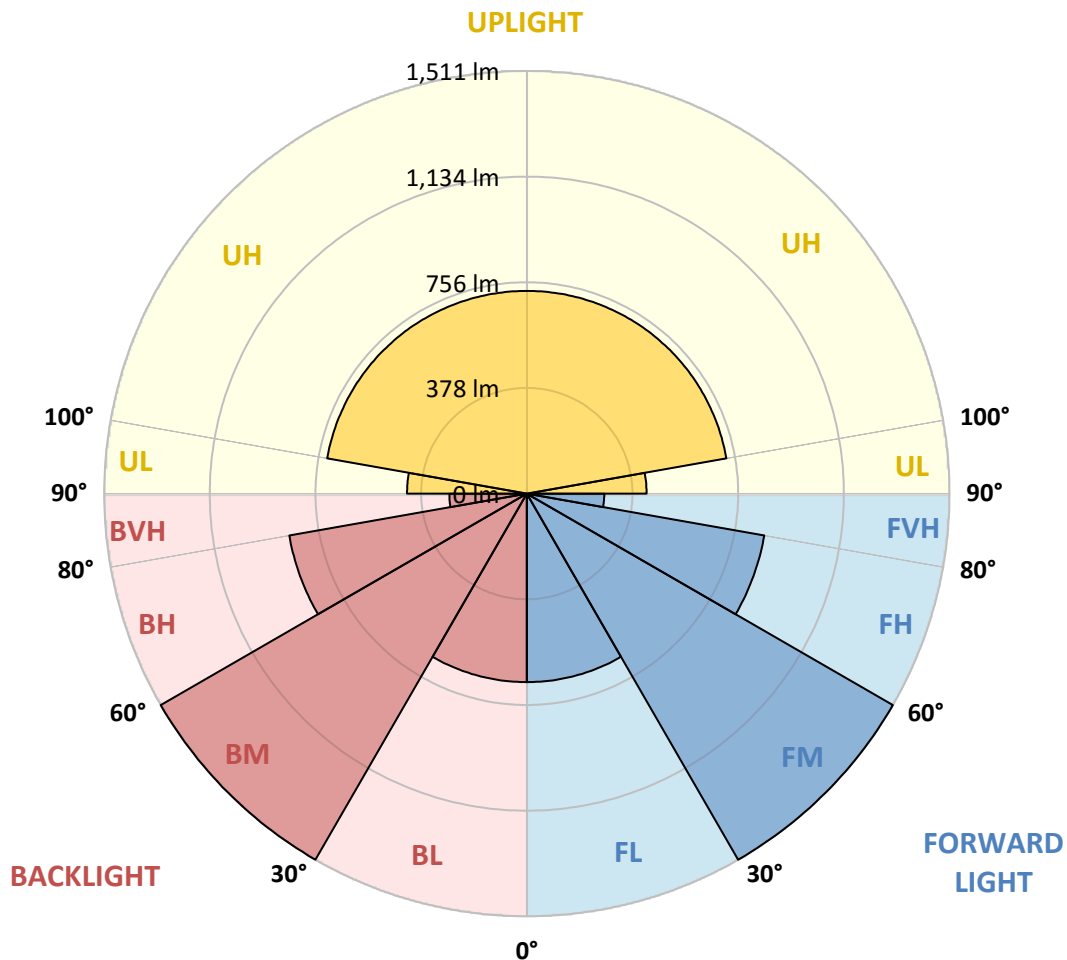
CATALOG NUMBER: FPS-4-LD4-2HI-30-OPL

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |         |         |
|----------------|--------|-----------|-------------------------|---------|---------|
|                |        |           | B                       | U       | G       |
| FL (0°-30°)    | 674.0  | 8.3       |                         |         |         |
| FM (30°-60°)   | 1511.5 | 18.7      |                         |         |         |
| FH (60°-80°)   | 862.3  | 10.6      |                         |         | G1/1800 |
| FVH (80°-90°)  | 277.1  | 3.4       |                         |         | G3/500  |
| BL (0°-30°)    | 674.0  | 8.3       | B2/1000                 |         |         |
| BM (30°-60°)   | 1511.5 | 18.7      | B2/2500                 |         |         |
| BH (60°-80°)   | 862.3  | 10.6      | B2/1000                 |         | G1/1800 |
| BVH (80°-90°)  | 277.1  | 3.4       |                         |         | G3/500  |
| UL (90°-100°)  | 428.4  | 5.3       |                         | U3/500  |         |
| UH (100°-180°) | 724.8  | 8.9       |                         | U4/1000 |         |

**BUG Rating: B2-U5-G3**

Type V Short





REPORT NUMBER: P35490-R3

CATALOG NUMBER: FPS-4-LD4-2HI-30-OPL

**CANDELA DISTRIBUTION (FULL):**

|        | 0°   | 22.5° | 45°  | 67.5° | 90°  |
|--------|------|-------|------|-------|------|
| 0°     | 1649 | 1649  | 1649 | 1649  | 1649 |
| 2.5°   | 1660 | 1659  | 1645 | 1643  | 1637 |
| 5°     | 1654 | 1655  | 1645 | 1646  | 1641 |
| 7.5°   | 1646 | 1649  | 1645 | 1650  | 1646 |
| 10°    | 1634 | 1640  | 1643 | 1653  | 1650 |
| 12.5°  | 1618 | 1629  | 1638 | 1652  | 1653 |
| 15°    | 1598 | 1614  | 1631 | 1652  | 1655 |
| 17.5°  | 1576 | 1597  | 1622 | 1653  | 1659 |
| 20°    | 1548 | 1575  | 1612 | 1652  | 1660 |
| 22.5°  | 1518 | 1551  | 1601 | 1648  | 1658 |
| 25°    | 1482 | 1526  | 1586 | 1641  | 1654 |
| 27.5°  | 1445 | 1494  | 1569 | 1630  | 1646 |
| 30°    | 1405 | 1462  | 1550 | 1616  | 1633 |
| 32.5°  | 1360 | 1427  | 1527 | 1599  | 1617 |
| 35°    | 1317 | 1387  | 1500 | 1580  | 1603 |
| 37.5°  | 1264 | 1351  | 1472 | 1559  | 1580 |
| 40°    | 1212 | 1307  | 1442 | 1533  | 1557 |
| 42.5°  | 1159 | 1266  | 1412 | 1507  | 1529 |
| 45°    | 1105 | 1222  | 1379 | 1479  | 1503 |
| 47.5°  | 1050 | 1176  | 1349 | 1453  | 1476 |
| 50°    | 989  | 1128  | 1314 | 1422  | 1442 |
| 52.5°  | 927  | 1081  | 1274 | 1385  | 1409 |
| 55°    | 863  | 1028  | 1227 | 1344  | 1368 |
| 57.5°  | 799  | 973   | 1182 | 1301  | 1325 |
| 60°    | 733  | 915   | 1126 | 1253  | 1283 |
| 62.5°  | 662  | 856   | 1075 | 1206  | 1235 |
| 65°    | 594  | 796   | 1022 | 1157  | 1185 |
| 67.5°  | 518  | 734   | 966  | 1100  | 1133 |
| 70°    | 449  | 672   | 906  | 1045  | 1080 |
| 72.5°  | 380  | 611   | 849  | 990   | 1025 |
| 75°    | 312  | 549   | 789  | 933   | 972  |
| 77.5°  | 243  | 487   | 732  | 877   | 914  |
| 80°    | 177  | 426   | 674  | 817   | 858  |
| 82.5°  | 116  | 367   | 615  | 764   | 804  |
| 85°    | 69   | 315   | 560  | 713   | 755  |
| 87.5°  | 37   | 269   | 521  | 678   | 719  |
| 90°    | 26   | 238   | 486  | 642   | 684  |
| 92.5°  | 25   | 222   | 453  | 606   | 648  |
| 95°    | 25   | 215   | 439  | 579   | 618  |
| 97.5°  | 25   | 206   | 427  | 566   | 605  |
| 100°   | 24   | 196   | 415  | 550   | 590  |
| 102.5° | 24   | 186   | 400  | 533   | 572  |
| 105°   | 23   | 175   | 385  | 515   | 553  |
| 107.5° | 23   | 165   | 368  | 495   | 534  |
| 110°   | 22   | 155   | 351  | 475   | 514  |



REPORT NUMBER: P35490-R3

CATALOG NUMBER: FPS-4-LD4-2HI-30-OPL

**CANDELA DISTRIBUTION (continued):**

|        | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|----|-------|-----|-------|-----|
| 112.5° | 21 | 143   | 336 | 456   | 494 |
| 115°   | 21 | 132   | 319 | 436   | 473 |
| 117.5° | 20 | 121   | 302 | 416   | 452 |
| 120°   | 19 | 109   | 285 | 396   | 431 |
| 122.5° | 18 | 95    | 267 | 374   | 409 |
| 125°   | 18 | 81    | 248 | 352   | 387 |
| 127.5° | 17 | 68    | 229 | 329   | 362 |
| 130°   | 16 | 56    | 207 | 306   | 338 |
| 132.5° | 15 | 44    | 184 | 282   | 312 |
| 135°   | 14 | 33    | 161 | 257   | 288 |
| 137.5° | 13 | 23    | 138 | 233   | 259 |
| 140°   | 12 | 15    | 116 | 207   | 233 |
| 142.5° | 11 | 9     | 94  | 180   | 204 |
| 145°   | 10 | 7     | 74  | 152   | 175 |
| 147.5° | 9  | 6     | 54  | 124   | 146 |
| 150°   | 8  | 5     | 36  | 96    | 118 |
| 152.5° | 7  | 5     | 19  | 68    | 88  |
| 155°   | 6  | 3     | 5   | 42    | 60  |
| 157.5° | 6  | 2     | 0   | 19    | 34  |
| 160°   | 5  | 2     | 0   | 2     | 7   |
| 162.5° | 0  | 0     | 0   | 0     | 0   |
| 165°   | 0  | 0     | 0   | 0     | 0   |
| 167.5° | 0  | 0     | 0   | 0     | 0   |
| 170°   | 0  | 0     | 0   | 0     | 0   |
| 172.5° | 0  | 0     | 0   | 0     | 0   |
| 175°   | 0  | 0     | 0   | 0     | 0   |
| 177.5° | 0  | 0     | 0   | 0     | 0   |
| 180°   | 0  | 0     | 0   | 0     | 0   |

(END OF REPORT)