

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: P12448-400

Luminaire Tested: **MPWP-FC-400-XX**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P12448-400
Test Lab: COOPER LIGHTING INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: MPWP-FC-400-XX
Description: LUMARK WAL-PAK HID WALL FIXTURE WITH FULL-CUTOFF DOOR WITH CLEAR GLASS LENS
Light Source: MOGUL BASE CLEAR QUARTZ ED37 400W PULSE START METAL HALIDE LAMP 400 WATTS
Ballast/Driver: -

Summary

Lumens per Lamp: 44000 (1 lamp)
Luminaire Lumens: 20978.6 lumens
Efficiency: 47.7%
Efficacy: 52.4 lumens/watt
Luminous Opening: Rectangular (W 1.15' x L: 0.73' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

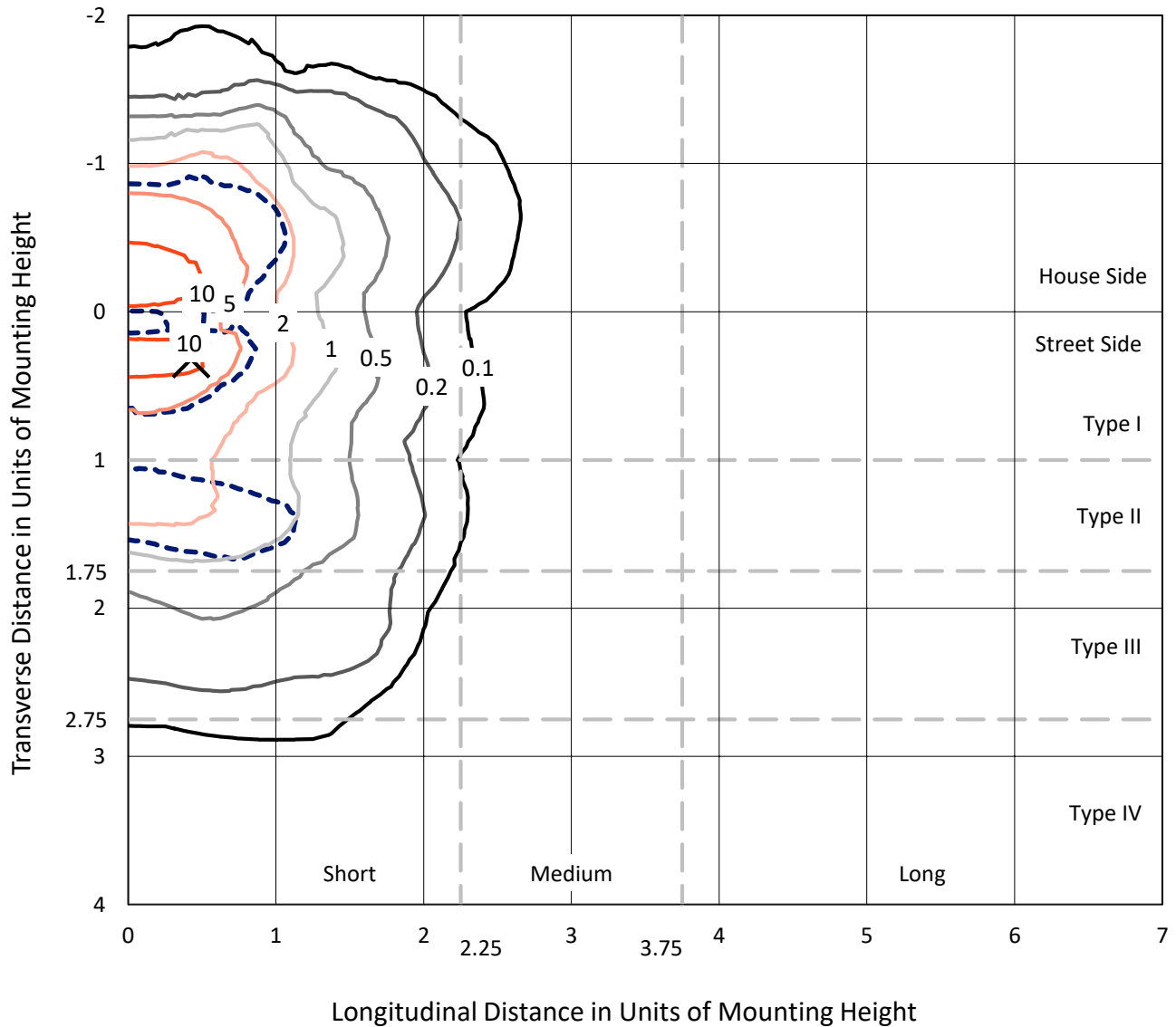
Input Watts (W): 400.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

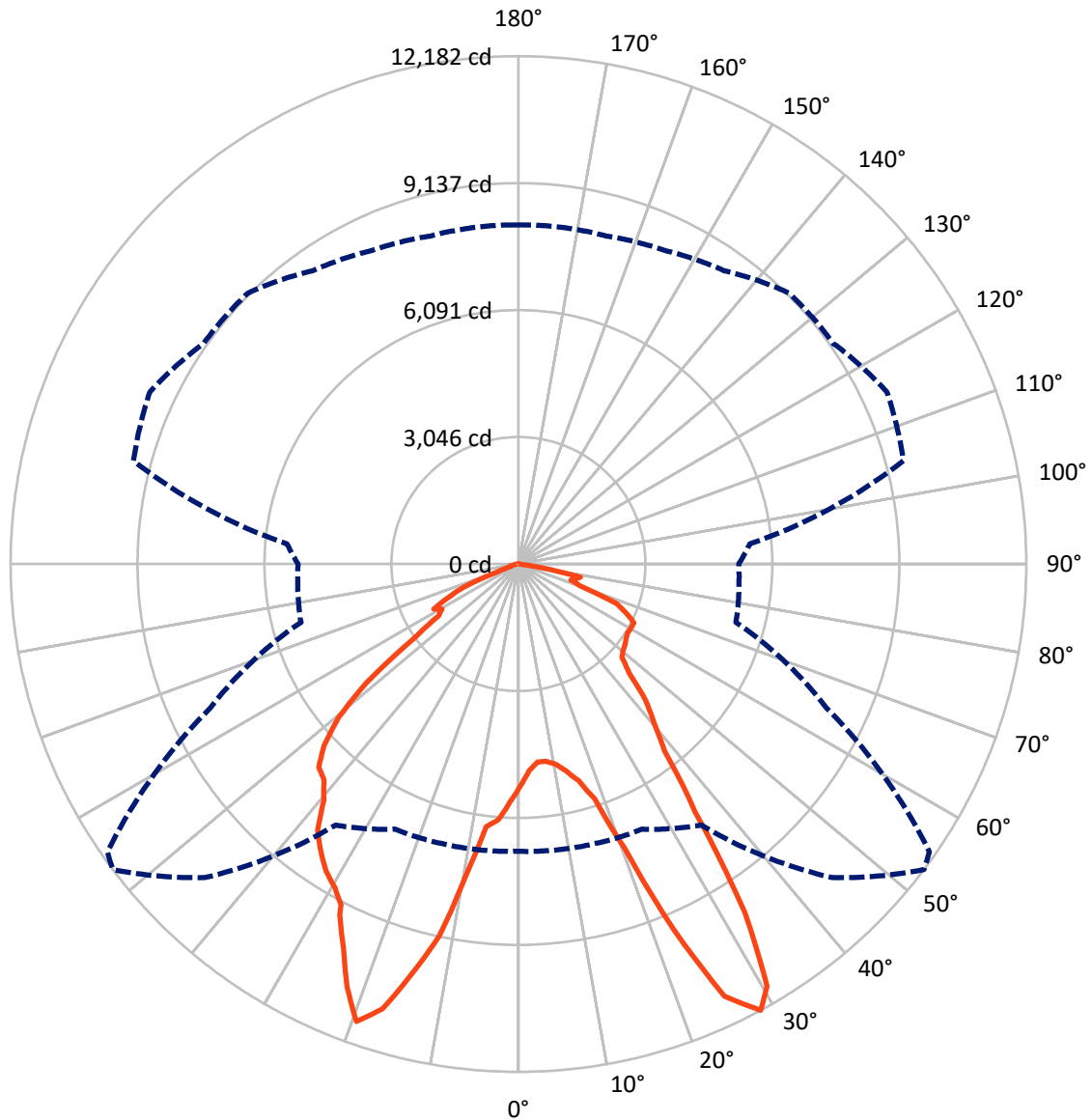
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 15.2 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 53-Deg Lateral - - - Horizontal Cone Through 28-Deg Vertical

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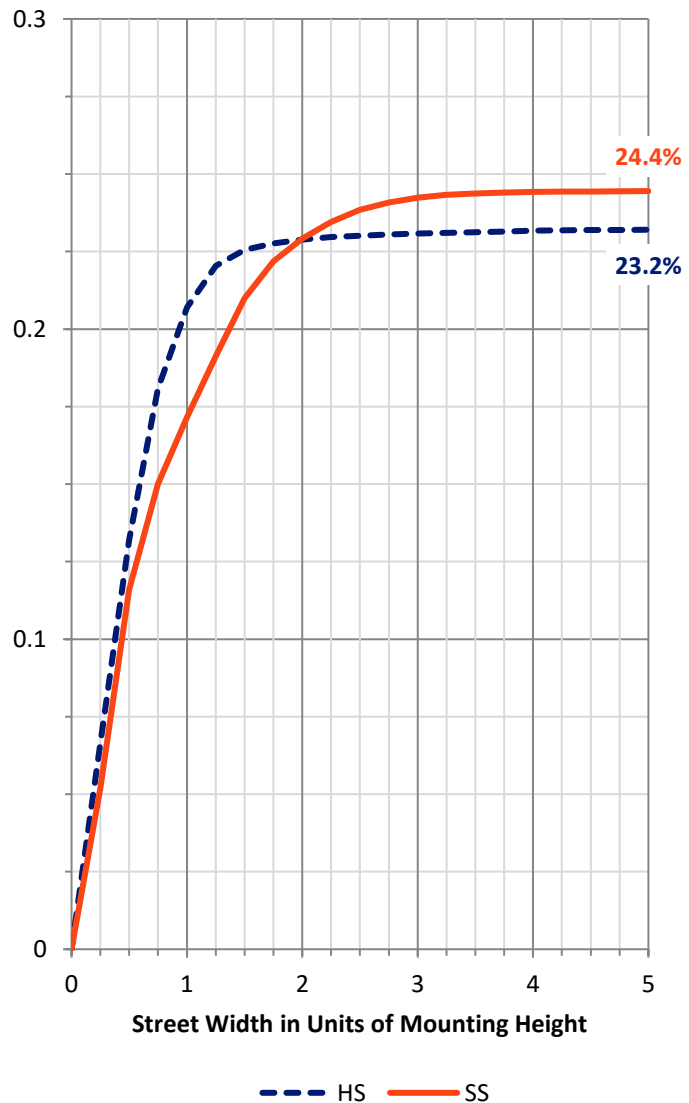
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10262.7	0.0	10262.7
	% Lamp	23.3	0.0	23.3
Street Side	Lumens	10715.9	0.0	10715.9
	% Lamp	24.4	0.0	24.4
Total	Lumens	20978.6	0.0	20978.6
	% Lamp	47.7	0.0	47.7

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	564.3	2.7	1.3
10°-20°	2272.3	10.8	5.2
20°-30°	3884.9	18.5	8.8
30°-40°	4392.0	20.9	10.0
40°-50°	3769.8	18.0	8.6
50°-60°	3304.5	15.8	7.5
60°-70°	2062.7	9.8	4.7
70°-80°	670.5	3.2	1.5
80°-90°	57.6	0.3	0.1
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	20978.6	100.0	47.7
0°-180°	20978.6	100.0	47.7



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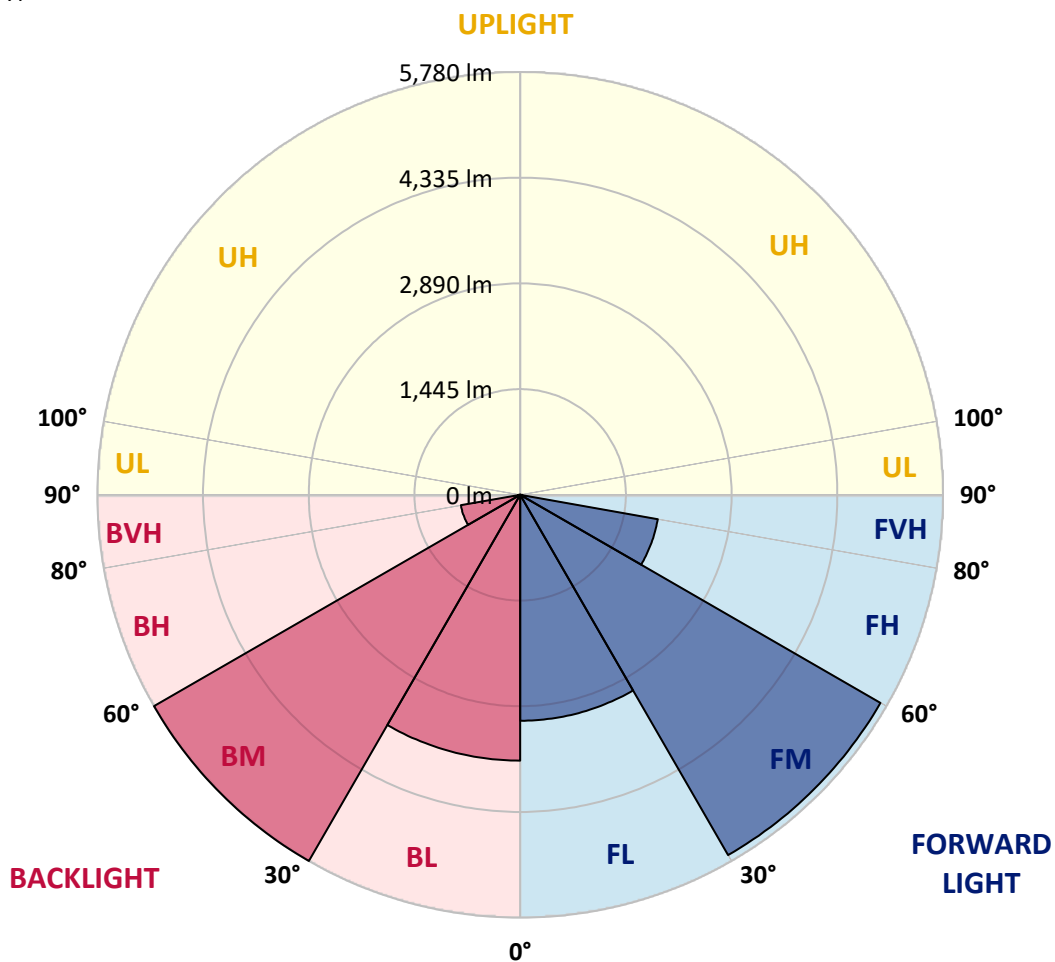
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3087.9	7.0			
FM (30°-60°)	5686.4	12.9			
FH (60°-80°)	1910.4	4.3			G2/5000
FVH (80°-90°)	31.2	0.1			G1/100
BL (0°-30°)	3633.6	8.3	B4/5000		
BM (30°-60°)	5779.9	13.1	B4/8500		
BH (60°-80°)	822.7	1.9	B2/1000		G2/1000
BVH (80°-90°)	26.4	0.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	
Trapped Light	23021.4	52.3			

BUG Rating: B4-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	53°	55°	65°	75°	85°
0°	5328	5328	5328	5328	5328	5328	5328	5328	5328	5328	5328
2.5°	4795	4785	4804	4837	4866	4901	4960	4967	5046	5150	5268
5°	4693	4695	4710	4708	4719	4735	4772	4775	4857	4991	5226
7.5°	4912	4911	4880	4825	4776	4766	4779	4764	4802	4913	5165
10°	5854	5843	5782	5556	5242	4949	4882	4872	4869	4942	5173
12.5°	6968	6943	6704	6294	5863	5369	5093	5044	5043	5088	5271
15°	9811	9745	9267	8324	7022	5872	5391	5307	5290	5357	5462
17.5°	10315	10330	10395	10549	9475	7284	5918	5707	5500	5648	5675
20°	9711	9713	9989	10523	11084	9716	7275	6736	5677	5863	5877
22.5°	8169	8258	8668	9473	10875	11387	9514	8668	6002	5815	5862
25°	7029	7052	7156	7979	9753	11599	11482	10825	6600	5637	5728
27.5°	6860	6865	6961	7077	8119	11025	12063	11854	7704	5430	5423
28°	6892	6909	6951	7017	7644	10638	12182	12035	8145	5399	5312
30°	6776	6832	6968	6899	7087	9373	11750	11920	9175	5331	5111
32.5°	5389	5617	6860	7165	6824	7481	9970	10510	9435	5444	4903
35°	4527	4548	4751	5706	6734	6590	7304	7825	8580	5958	4811
37.5°	4591	4593	4521	4454	5496	5971	5689	5733	7486	6719	4752
40°	4671	4694	4662	4433	4145	5158	5004	5038	6176	6038	4462
42.5°	4757	4754	4662	4440	4092	3877	4473	4412	4709	5279	4213
45°	4952	4930	4751	4446	4067	3698	3720	3624	4256	5499	3911
47.5°	5704	5634	5059	4490	4059	3647	3341	3307	4295	5204	3590
50°	6559	6530	5841	4919	4077	3638	3254	3170	3995	4494	3233
52.5°	7072	7132	6866	5790	4366	3628	3205	3107	3549	3905	2865
55°	7075	7195	7378	6703	5063	3677	3138	3008	2930	3559	2591
57.5°	4863	5256	6893	7482	5741	3915	3096	2939	2438	3171	2346
60°	3354	3713	4768	6317	6488	4445	3103	2898	2222	2731	2009
62.5°	2977	3320	4435	4653	5217	4961	3112	2706	1740	2096	1419
65°	2700	2917	4249	4238	3744	4297	2843	2439	1374	1581	1083
67.5°	2552	2745	3802	3790	3617	2837	2550	2406	1131	1298	944
70°	1730	1777	2459	2935	4340	2072	1573	1533	1060	949	765
72.5°	840	900	1586	2325	1619	970	1320	1207	695	890	687
75°	170	175	301	560	499	685	1406	1260	834	1024	694
77.5°	101	102	123	100	111	670	1518	1339	597	869	578
80°	51	49	66	79	63	147	586	592	328	395	396
82.5°	27	31	31	41	46	39	50	64	118	162	134
85°	16	16	13	17	13	20	25	24	30	27	27
87.5°	12	17	12	14	13	14	12	14	12	12	41
90°	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°	5328	5328	5328	5328	5328	5328	5328	5328	5328	5328	5328
2.5°	5321	5373	5475	5593	5689	5782	5852	5922	5979	5991	6000
5°	5351	5490	5762	5990	6139	6228	6257	6315	6362	6365	6379
7.5°	5330	5505	5844	6096	6266	6654	7361	8198	8704	8924	8957
10°	5359	5543	5896	6187	7231	8715	9481	10029	10390	10590	10637
12.5°	5428	5591	5909	6856	8906	9969	10857	11181	11088	10938	10972
15°	5558	5646	6064	8089	9846	11261	11367	10863	10006	9478	9454
17.5°	5677	5661	6275	9246	11055	11564	10441	9507	9330	9284	9299
20°	5808	5708	6963	10050	11883	10675	9746	9277	9058	9004	8991
22.5°	5759	5698	7812	10855	11216	9918	9218	8973	8795	8722	8749
25°	5615	5668	8658	11067	10314	9324	8844	8694	8448	8301	8304
27.5°	5358	5630	9329	10056	9540	9018	8584	8386	8209	8117	8146
28°	5286	5572	9560	9757	9222	9186	8592	8299	8146	8141	8134
30°	5106	5493	9474	8810	8833	9338	8363	8120	8171	8156	8167
32.5°	5039	5380	9225	7615	8672	8796	8063	8485	8563	8741	8778
35°	4931	5090	8963	7616	8435	8105	8405	8647	8612	8608	8653
37.5°	4658	4734	8073	7397	8013	7953	8507	8356	7548	6874	6802
40°	4328	4245	6810	7070	7211	7825	8208	7010	5773	5336	5313
42.5°	3971	3739	5787	6813	6867	7369	6909	5847	4932	5024	5145
45°	3535	3293	5084	6711	6899	6562	5573	5603	4241	3033	3109
47.5°	3163	2984	4387	6337	6537	5659	5198	5189	2890	2296	2217
50°	2915	2768	4142	5347	5800	5154	4989	5105	2472	2467	2553
52.5°	2609	2488	4250	4334	4596	4769	5363	3604	2136	1531	1402
55°	2357	2296	3958	4119	2854	3971	5084	1646	742	548	532
57.5°	2142	2124	3608	3919	2237	2480	3593	922	633	485	484
60°	1861	1931	3174	3132	2198	1852	1842	715	633	565	569
62.5°	1329	1578	2588	2362	2352	2079	627	698	780	486	453
65°	1022	1546	2131	1872	2009	1290	497	715	502	368	382
67.5°	920	1486	2019	1880	1674	486	622	512	345	329	335
70°	693	1142	1581	1520	595	437	504	333	317	331	325
72.5°	647	919	1178	984	217	188	230	318	358	398	401
75°	711	675	769	330	227	52	112	356	548	361	343
77.5°	472	463	436	337	214	138	178	146	68	48	48
80°	311	376	289	336	70	144	122	40	33	35	30
82.5°	135	201	186	73	69	49	22	31	27	27	26
85°	37	51	94	41	21	7	10	14	22	13	13
87.5°	50	29	12	24	9	6	5	4	2	2	8
90°	0	0	0	0	0	0	0	0	0	0	0

(END OF REPORT)