

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: McGRAW-EDISON

Report Number: 765508

Luminaire Tested: **GSM-XX-400-HPS-XX-FT-FG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: 765508
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GSM-XX-400-HPS-XX-FT-FG
Description: MEDIUM ARCHITECTURAL AREA LUMINAIRE-HORIZONTAL LAMP-FORWARD THROW
Light Source: 400 WATT HPS CLEAR E-18
Ballast/Driver: -

Summary

Lumens per Lamp: 50000 (1 lamp)
Luminaire Lumens: 27163.1 lumens
Efficiency: 54.3%
Efficacy: 58.4 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1.81' x L: 1.81' x H: 0.83')
IES Classification: Type IV - Short - Cutoff
BUG Rating: B4 - U3 - G3

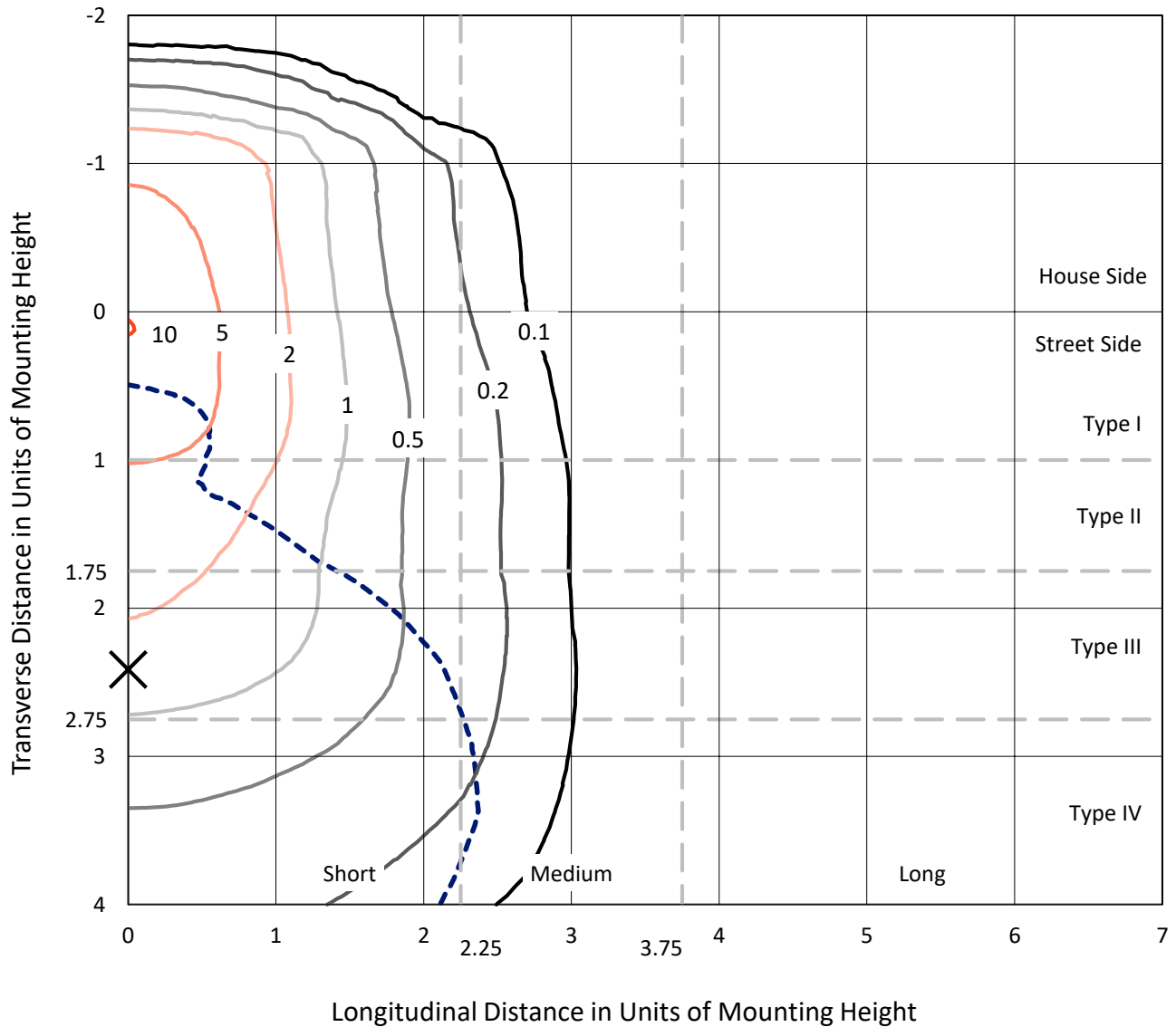
Input Watts (W): 465
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

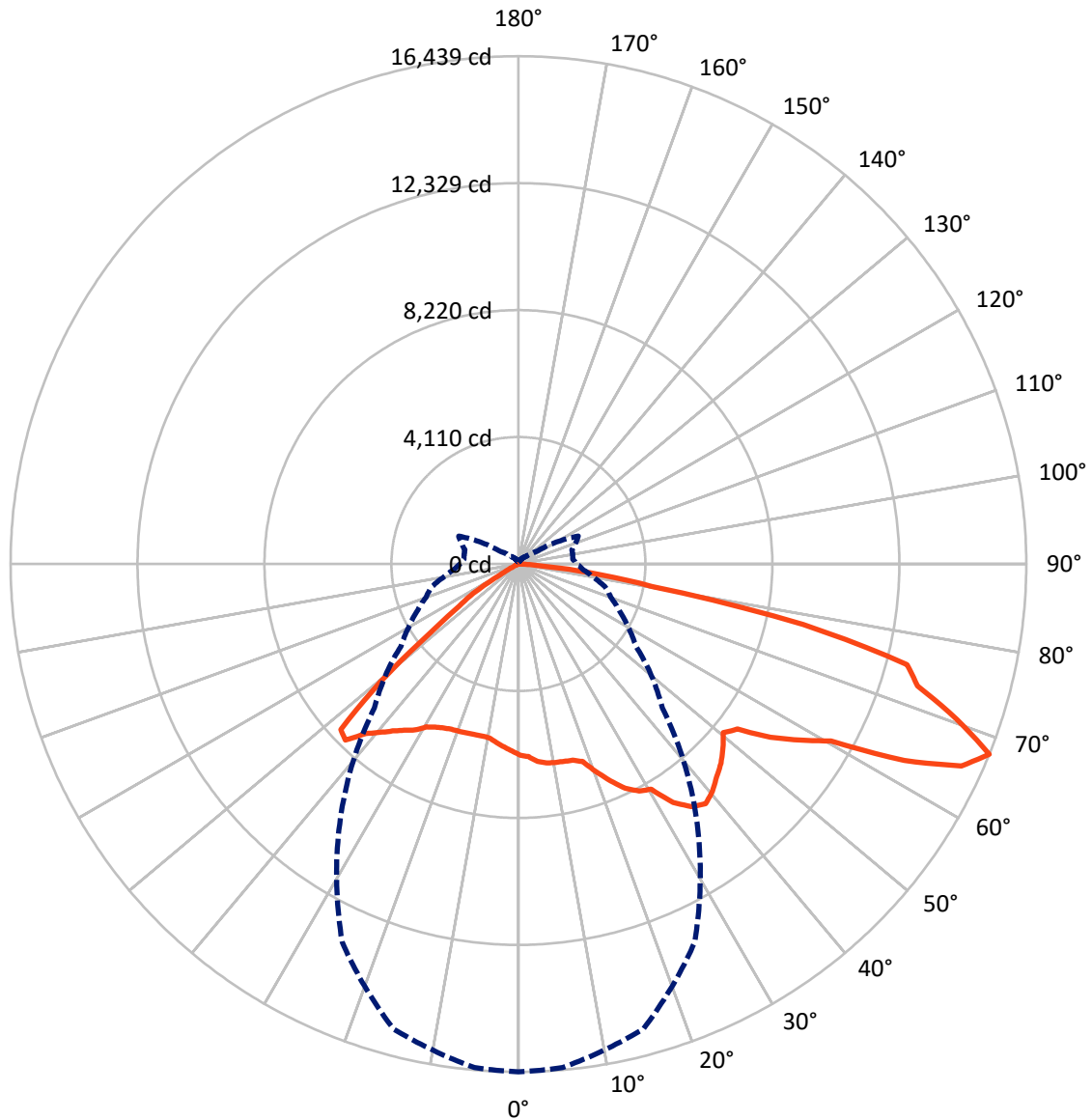
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.1 fc
 Type IV - Short - Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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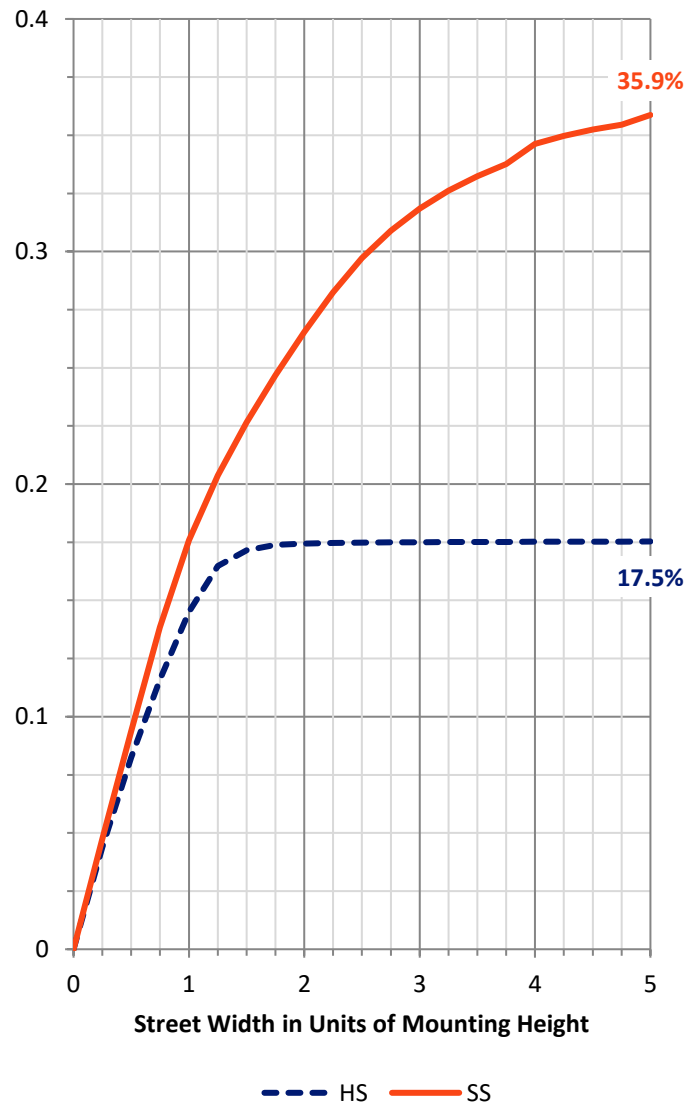
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8837.1	141.6	8978.7
	% Lamp	17.7	0.3	18.0
Street Side	Lumens	18000.4	184.1	18184.4
	% Lamp	36.0	0.4	36.4
Total	Lumens	26837.5	325.6	27163.1
	% Lamp	53.7	0.7	54.3

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	586.4	2.2	1.2
10°-20°	1710.4	6.3	3.4
20°-30°	2820.8	10.4	5.6
30°-40°	3989.4	14.7	8.0
40°-50°	4868.1	17.9	9.7
50°-60°	4659.5	17.2	9.3
60°-70°	4488.2	16.5	9.0
70°-80°	3296.4	12.1	6.6
80°-90°	418.3	1.5	0.8
90°-100°	61.4	0.2	0.1
100°-110°	61.1	0.2	0.1
110°-120°	45.9	0.2	0.1
120°-130°	43.3	0.2	0.1
130°-140°	38.5	0.1	0.1
140°-150°	32.2	0.1	0.1
150°-160°	23.8	0.1	0.0
160°-170°	14.6	0.1	0.0
170°-180°	4.8	0.0	0.0
0°-90°	26837.5	98.8	53.7
0°-180°	27163.1	100.0	54.3



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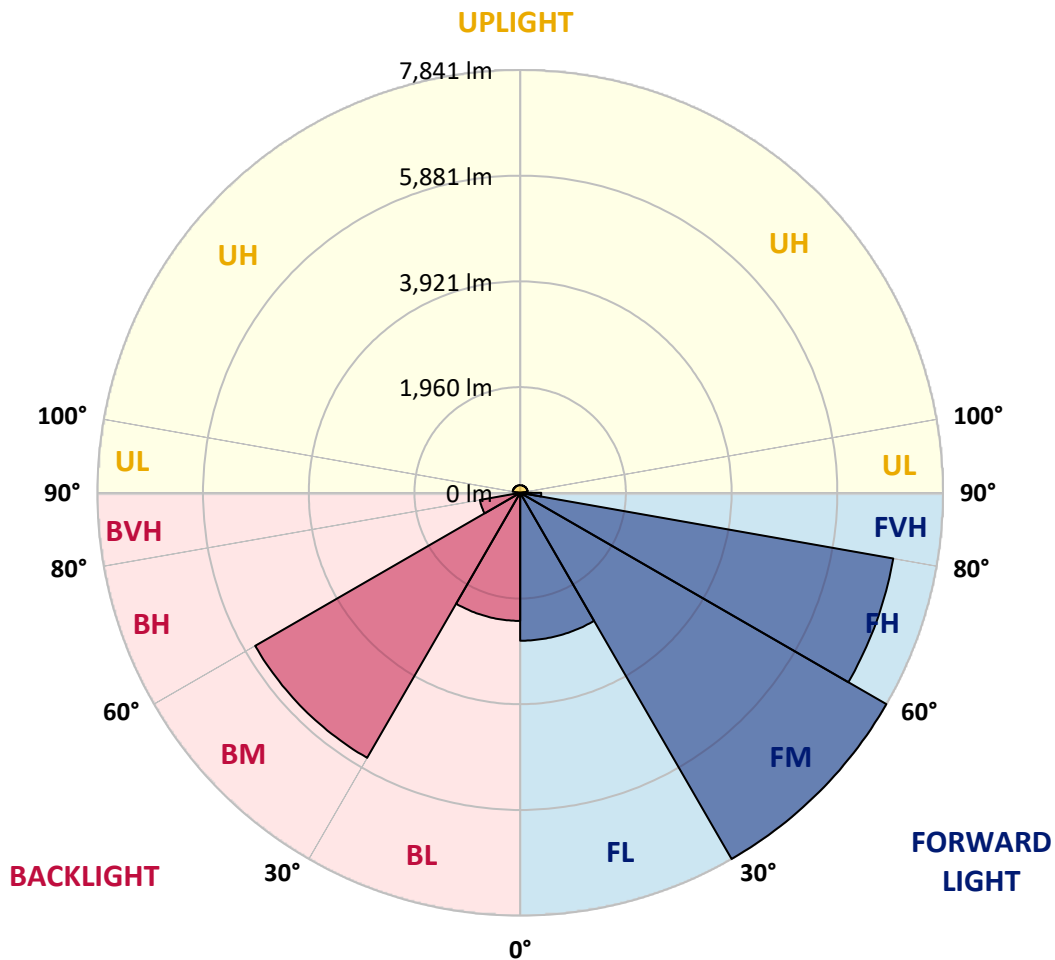
CATALOG NUMBER: GSM-XX-400-HPS-XX-FT-FG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2742.5	5.5			
FM	(30°-60°)	7841.4	15.7			
FH	(60°-80°)	7026.1	14.1			G3/7500
FVH	(80°-90°)	390.3	0.8			G3/500
BL	(0°-30°)	2375.1	4.8	B3/2500		
BM	(30°-60°)	5675.5	11.4	B4/8500		
BH	(60°-80°)	758.6	1.5	B2/1000		G2/1000
BVH	(80°-90°)	27.9	0.1			G1/100
UL	(90°-100°)	61.4	0.1		U3/500	
UH	(100°-180°)	141.6	0.3		U3/500	
Trapped Light		22836.9	45.7			

BUG Rating: B4-U3-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	70°	75°
0°	6185	6185	6185	6185	6185	6185	6185	6185	6185	6185	6185
2.5°	6241	6268	6248	6271	6271	6248	6245	6242	6238	6236	6244
5°	6421	6395	6386	6354	6345	6305	6293	6292	6261	6249	6241
7.5°	6499	6469	6446	6431	6408	6351	6329	6310	6280	6255	6223
10°	6537	6513	6491	6468	6441	6374	6341	6312	6280	6251	6209
12.5°	6552	6536	6514	6492	6450	6376	6329	6294	6258	6219	6172
15°	6593	6600	6558	6508	6434	6350	6305	6262	6220	6167	6119
17.5°	6721	6751	6674	6561	6437	6324	6249	6191	6152	6105	6050
20°	7171	7030	6966	6729	6514	6313	6190	6136	6076	6033	5976
22.5°	7625	7430	7311	7040	6690	6328	6129	6069	5999	5940	5871
25°	8044	8042	7788	7397	6923	6430	6087	5975	5922	5842	5758
27.5°	8323	8310	8070	7730	7227	6584	6059	5887	5803	5740	5662
30°	8460	8567	8387	8019	7567	6790	6055	5823	5672	5634	5554
32.5°	9201	8982	8798	8385	7788	6991	6092	5764	5562	5467	5403
35°	9646	9645	9381	8832	7980	7052	6158	5711	5429	5285	5362
37.5°	9841	9802	9646	9233	8282	7030	6201	5690	5320	5130	5045
40°	9672	9701	9637	9381	8477	7058	6105	5678	5198	4980	4867
42.5°	9410	9464	9483	9233	8348	7045	5993	5544	5133	4842	4691
45°	9195	9224	9173	8960	8089	6933	5921	5458	5051	4689	4522
47.5°	8910	8763	8733	8518	7744	6738	5918	5409	4945	4554	4332
50°	8585	8548	8416	8127	7455	6665	5858	5365	4836	4454	4156
52.5°	8878	8784	8493	7975	7334	6630	5765	5288	4765	4346	4012
55°	9902	9844	9162	8352	7378	6561	5629	5091	4766	4173	3821
57.5°	10748	10735	10097	8890	7555	6363	5453	4944	4483	4049	3667
60°	11626	11703	10880	9517	7910	6267	5246	4752	4244	3911	3491
62.5°	14014	13408	12185	10350	8285	6252	5012	4528	4045	3737	3327
65°	15756	15427	14152	11634	8772	6354	4747	4298	3834	3462	3142
67.5°	16439	16364	15589	13502	10040	6587	4647	4106	3622	3189	2923
70°	15055	14787	14514	13610	10902	6940	4541	3844	3308	2867	2470
72.5°	13508	13527	13098	12542	10623	7065	4172	3292	2760	2293	1780
75°	12996	12934	12221	10827	9325	6117	3331	2462	1841	1435	1144
77.5°	9425	9994	9909	8602	7273	4551	1922	1461	1189	874	692
80°	4382	3842	4172	4727	4191	2562	1376	963	763	634	513
82.5°	2318	1800	1893	1685	1464	1172	724	515	419	356	238
85°	611	906	718	634	385	269	247	206	147	125	118
87.5°	215	199	246	188	138	129	87	73	65	64	63
90°	90	95	93	77	81	84	61	54	48	47	47
92.5°	47	51	65	54	58	106	64	57	52	47	45
95°	79	76	111	92	89	95	67	63	52	47	45
97.5°	108	122	173	125	68	81	67	68	54	45	45
100°	61	87	154	124	67	61	54	52	49	47	47
102.5°	64	76	167	321	189	51	52	52	49	48	47
105°	41	49	79	119	74	49	51	49	49	48	48
107.5°	38	38	61	76	67	48	49	49	49	49	49
110°	35	35	45	64	60	48	48	48	49	49	49



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	70°	75°
112.5°	35	35	42	52	52	47	48	48	49	49	49
115°	35	35	39	48	48	47	48	49	49	49	49
117.5°	35	35	39	47	48	47	48	49	49	51	51
120°	38	38	39	45	47	49	51	52	52	52	54
122.5°	38	39	42	47	48	49	51	52	54	54	54
125°	41	41	42	47	48	49	52	54	54	55	55
127.5°	41	41	44	47	49	52	54	55	55	55	55
130°	41	42	45	48	49	52	55	55	57	55	57
132.5°	44	42	45	48	51	52	55	55	57	58	58
135°	44	44	45	48	51	54	55	57	57	58	60
137.5°	44	44	47	49	51	55	55	57	57	58	58
140°	47	45	47	51	54	55	58	58	57	58	58
142.5°	47	47	48	51	54	55	58	60	60	60	58
145°	47	47	48	51	54	55	58	60	60	61	61
147.5°	47	45	48	51	54	55	58	60	60	61	61
150°	47	47	48	51	54	55	58	60	60	61	61
152.5°	47	47	48	51	54	55	58	60	60	61	61
155°	47	45	48	51	54	55	58	60	60	61	61
157.5°	47	45	48	51	54	55	58	60	60	61	61
160°	47	45	47	51	54	55	58	60	60	61	61
162.5°	47	45	48	51	54	55	58	60	60	61	61
165°	47	45	48	51	54	57	58	60	61	61	61
167.5°	47	45	47	51	54	56	58	60	61	61	61
170°	47	45	44	51	54	56	58	60	61	61	61
172.5°	47	45	39	51	54	56	58	60	61	61	61
175°	47	45	33	51	54	56	58	60	61	61	61
177.5°	47	45	26	51	54	56	58	60	61	61	61
180°	50	50	50	50	50	50	50	50	50	50	50



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CATALOG NUMBER: GSM-XX-400-HPS-XX-FT-FG

CANDELA DISTRIBUTION (continued):

	80°	85°	90°	95°	105°	115°	125°	135°	145°	155°	165°
0°	6185	6185	6185	6185	6185	6185	6185	6185	6185	6185	6185
2.5°	6245	6249	6244	6229	6178	6121	6091	6066	6040	6020	6033
5°	6226	6219	6203	6200	6148	6068	6015	5983	5953	5918	5905
7.5°	6201	6178	6152	6133	6078	6007	5941	5902	5870	5831	5813
10°	6174	6135	6100	6047	5998	5915	5842	5796	5764	5767	5755
12.5°	6137	6059	6025	5978	5884	5828	5762	5733	5717	5720	5704
15°	6053	5993	5932	5895	5787	5706	5668	5665	5679	5684	5681
17.5°	5976	5914	5842	5777	5684	5605	5598	5614	5639	5663	5671
20°	5896	5820	5740	5666	5569	5489	5524	5567	5613	5653	5691
22.5°	5800	5720	5599	5517	5415	5393	5440	5514	5598	5682	5749
25°	5661	5560	5448	5354	5252	5269	5354	5482	5607	5727	5813
27.5°	5559	5444	5325	5220	5117	5171	5288	5466	5640	5788	5905
30°	5453	5328	5197	5086	4989	5041	5236	5464	5687	5873	6053
32.5°	5328	5162	5027	4916	4827	4947	5192	5492	5807	6015	6172
35°	5144	4983	4845	4731	4678	4833	5153	5556	5908	6185	6376
37.5°	4955	4824	4694	4589	4560	4747	5130	5610	6015	6348	6590
40°	4785	4657	4537	4445	4441	4640	5102	5646	6127	6533	6869
42.5°	4608	4586	4329	4291	4310	4545	5060	5691	6290	6758	7218
45°	4387	4263	4106	4079	4124	4433	4955	5707	6422	7112	7565
47.5°	4173	4036	3917	3839	3903	4247	4835	5714	6591	7404	7922
50°	4000	3850	3719	3634	3702	4032	4727	5770	6780	7482	6678
52.5°	3814	3609	3456	3363	3437	3830	4643	5842	6835	5988	3837
55°	3589	3405	3184	3136	3210	3628	4577	5928	5518	2957	2622
57.5°	3354	3139	2962	2856	2911	3349	4404	5550	3029	2151	1932
60°	3170	2917	2725	2609	2662	3062	4180	3770	2043	1540	967
62.5°	2972	2683	2478	2350	2335	2783	3703	1710	1229	680	305
65°	2853	2380	2156	2034	2057	2489	2161	947	528	263	142
67.5°	2463	2105	1890	1770	1794	2137	699	350	237	132	83
70°	2095	1714	1421	1368	1471	1423	333	172	96	65	58
72.5°	1450	1249	1031	987	933	372	166	103	68	57	54
75°	915	701	641	605	413	177	111	71	60	51	48
77.5°	529	410	348	270	182	128	81	60	51	47	45
80°	387	298	234	192	121	83	64	54	47	44	42
82.5°	206	180	147	122	80	67	54	48	42	39	38
85°	109	106	89	77	61	55	47	44	38	36	35
87.5°	55	48	51	51	48	45	42	38	36	35	33
90°	45	45	44	44	42	41	41	38	36	35	32
92.5°	44	44	44	42	42	41	39	39	36	35	35
95°	45	44	44	42	42	42	41	39	38	36	35
97.5°	45	44	44	44	42	42	42	39	39	36	38
100°	45	45	44	44	45	44	42	42	39	39	38
102.5°	48	45	45	45	44	45	42	42	41	39	39
105°	48	45	45	45	47	47	44	42	41	41	41
107.5°	48	48	47	47	48	48	44	42	42	42	42
110°	49	47	47	45	48	47	45	44	44	42	42



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CANDELA DISTRIBUTION (continued):

	80°	85°	90°	95°	105°	115°	125°	135°	145°	155°	165°
112.5°	49	48	48	48	48	47	45	44	44	44	44
115°	49	49	48	48	48	47	45	44	44	45	45
117.5°	51	49	49	48	48	48	47	45	45	45	45
120°	51	51	49	49	48	48	47	45	45	45	45
122.5°	54	51	49	49	49	48	47	47	45	45	45
125°	58	54	52	52	51	48	47	47	45	45	47
127.5°	60	54	52	52	51	49	48	47	45	45	45
130°	60	54	54	52	51	49	47	47	45	45	45
132.5°	57	55	54	52	51	48	47	47	45	44	44
135°	57	55	54	54	51	48	48	48	45	44	44
137.5°	58	57	57	54	52	49	48	47	45	44	44
140°	58	57	57	55	52	51	48	48	45	44	44
142.5°	58	58	57	55	54	51	48	48	45	44	42
145°	60	58	57	57	54	51	49	48	45	44	42
147.5°	60	60	60	57	54	51	49	47	45	44	42
150°	61	60	60	57	54	51	49	48	45	44	42
152.5°	61	60	60	57	54	51	49	48	45	44	42
155°	61	61	60	58	54	52	49	48	45	44	42
157.5°	61	60	60	58	55	51	49	48	45	44	42
160°	61	60	60	58	54	51	49	47	45	44	42
162.5°	61	60	60	58	54	51	49	48	45	44	42
165°	61	61	60	58	55	54	49	48	45	44	42
167.5°	61	61	60	58	55	54	49	47	45	44	42
170°	61	61	60	58	55	54	49	44	45	44	42
172.5°	61	61	60	58	55	54	49	39	45	44	42
175°	61	61	60	58	55	54	49	33	45	44	42
177.5°	61	61	60	58	55	54	49	26	45	44	42
180°	50	50	50	50	50	50	50	50	50	50	50



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CANDELA DISTRIBUTION (continued):

	175°	180°
0°	6185	6185
2.5°	6043	6055
5°	5932	5941
7.5°	5807	5822
10°	5725	5703
12.5°	5690	5688
15°	5697	5697
17.5°	5716	5714
20°	5720	5743
22.5°	5781	5770
25°	5835	5828
27.5°	5928	5924
30°	6063	6057
32.5°	6300	6334
35°	6514	6529
37.5°	6751	6764
40°	7043	7064
42.5°	7357	7384
45°	7954	7988
47.5°	7860	7860
50°	5909	5877
52.5°	3606	3589
55°	2350	2356
57.5°	1713	1742
60°	679	701
62.5°	275	282
65°	121	93
67.5°	70	64
70°	54	55
72.5°	52	52
75°	48	49
77.5°	44	44
80°	41	41
82.5°	38	38
85°	35	35
87.5°	33	32
90°	32	32
92.5°	33	35
95°	35	35
97.5°	38	38
100°	38	38
102.5°	38	41
105°	41	41
107.5°	44	44
110°	44	44



REPORT NUMBER: 765508

CATALOG NUMBER: GSM-XX-400-HPS-XX-FT-FG

CANDELA DISTRIBUTION (continued):

	175°	180°
112.5°	44	44
115°	44	44
117.5°	44	47
120°	44	44
122.5°	45	47
125°	47	47
127.5°	47	47
130°	44	44
132.5°	44	44
135°	44	44
137.5°	44	44
140°	44	44
142.5°	44	44
145°	44	44
147.5°	42	44
150°	42	44
152.5°	42	41
155°	42	41
157.5°	41	41
160°	41	41
162.5°	41	41
165°	41	41
167.5°	41	41
170°	41	41
172.5°	41	41
175°	41	41
177.5°	41	41
180°	50	50

(END OF REPORT)