

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: FAIL-SAFE

Report Number: 6580

Luminaire Tested: **HCS-100S**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 6580
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: HCS-100S
Description: FAIL-SAFE CEILING MOUNT WITH LENS 100WATT HPS FROM 4287
Light Source: S54SB-100 9500 LUMENS
Ballast/Driver: -

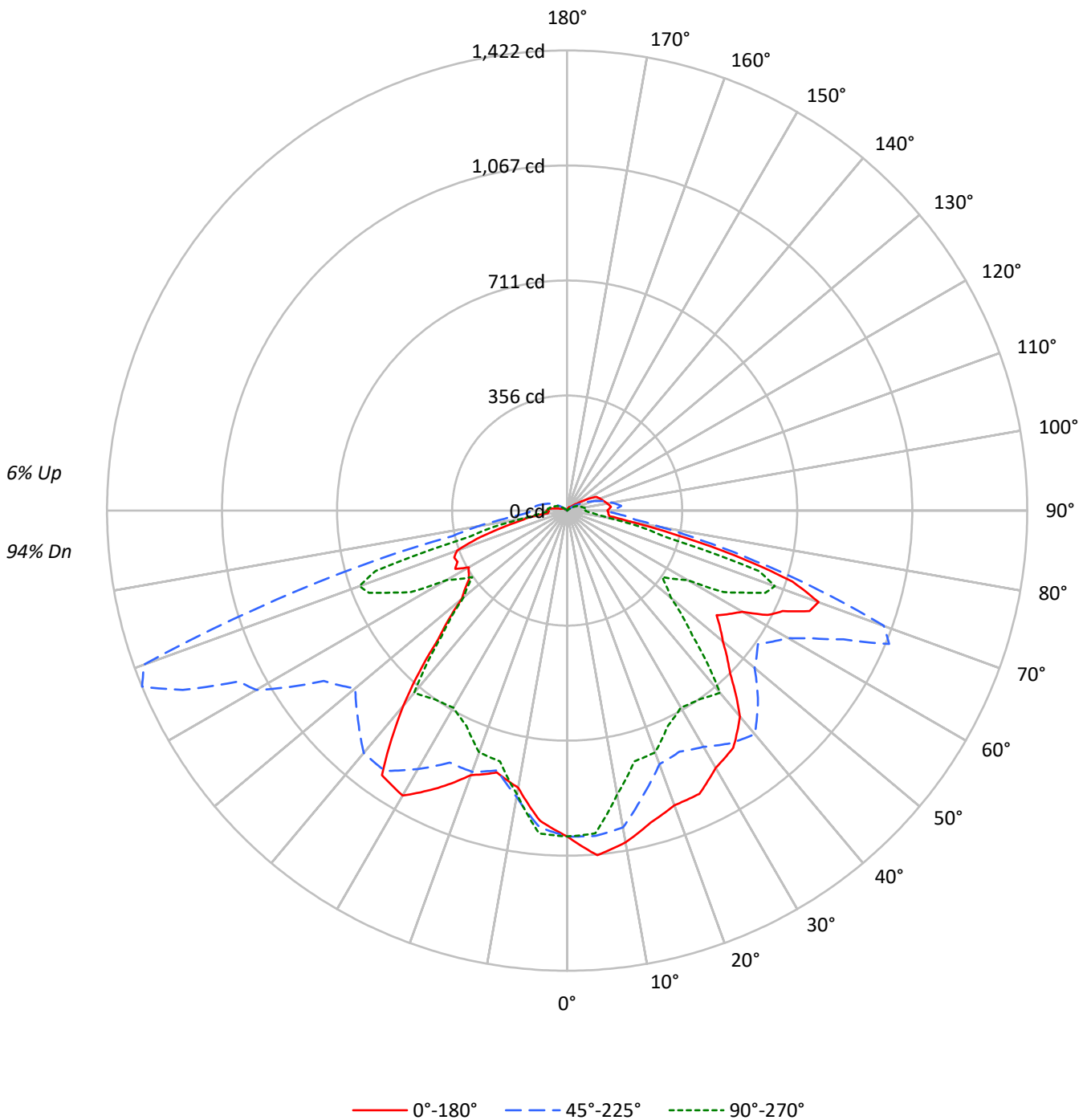
Summary

Lumens per Lamp: 9500 (1 lamp)
Luminaire Lumens: 4314.4 lumens
Efficiency: 45.4%
Efficacy: 32.0 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.04 / 1.55
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 1' x H: 0.25')
CIE Type: Direct

Input Watts (W): 135
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

TEST NUMBER: 6580
CATALOG NUMBER: HCS-100S

Luminous Intensity Polar Plot





TEST NUMBER: 6580
 CATALOG NUMBER: HCS-100S

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	53	53	53	53	52	52	52	52	49	49	49	46	46	46	44	44	44	43
1	47	45	42	40	46	43	41	39	41	39	37	38	37	36	36	35	34	33
2	42	38	34	31	41	36	33	30	34	31	29	32	30	28	30	28	27	25
3	38	32	28	24	36	31	27	24	29	26	23	27	25	22	26	23	21	20
4	34	28	23	20	33	27	23	19	25	22	19	24	21	18	23	20	18	16
5	31	25	20	16	30	24	19	16	22	19	16	21	18	15	20	17	15	14
6	29	22	17	14	27	21	17	14	20	16	14	19	16	13	18	15	13	12
7	26	20	15	12	25	19	15	12	18	14	12	17	14	11	16	13	11	10
8	25	18	14	11	24	17	13	11	17	13	10	16	13	10	15	12	10	9
9	23	16	12	10	22	16	12	10	15	12	9	14	11	9	14	11	9	8
10	21	15	11	9	21	15	11	9	14	11	8	13	10	8	13	10	8	7

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	10839	10839	10839
5°	11303	10584	10172
10°	10898	9327	9108
15°	10423	8376	8752
20°	10174	8347	9134
25°	10275	7818	10062
30°	9971	7636	11046
35°	10009	7962	11160
40°	9652	8537	9141
45°	8671	6686	6868
50°	8102	5393	5483
55°	7799	4951	5117
60°	9389	6445	5273
65°	12187	9948	6201
70°	15429	12743	6754
75°	11554	6691	4647
80°	5102	3282	2974
85°	4098	2305	2049



TEST NUMBER: 6580
 CATALOG NUMBER: HCS-100S

ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	92.9	2.2	1.0	0°	1007	1007	1007	1007	1007	
10°-20°	247.7	5.7	2.6	5°	1069	1009	1001	982	962	100
20°-30°	393.3	9.1	4.1	15°	998	910	802	831	838	283
30°-40°	528.8	12.3	5.6	25°	966	822	735	859	946	441
40°-50°	547.3	12.7	5.8	35°	895	878	712	982	998	555
50°-60°	554.5	12.9	5.8	45°	712	834	549	914	564	556
60°-70°	888.8	20.6	9.4	55°	564	720	358	918	370	534
70°-80°	630.3	14.6	6.6	65°	735	942	600	1311	374	739
80°-90°	158.3	3.7	1.7	75°	537	600	311	663	216	558
90°-100°	118.6	2.7	1.2	85°	128	176	72	144	64	115
100°-110°	85.9	2.0	0.9	90°	124	136	56	116	64	69
110°-120°	49.6	1.1	0.5	95°	136	168	60	108	56	105
120°-130°	18.5	0.4	0.2	105°	116	112	45	76	20	124
130°-140°	3.2	0.1	0.0	115°	100	56	33	48	17	88
140°-150°	0.2	0.0	0.0	125°	37	20	13	13	1	43
150°-160°	0.1	0.0	0.0	135°	17	1	1	1	0	16
160°-170°	0.0	0.0	0.0	145°	13	0	0	0	0	8
170°-180°	0.0	0.0	0.0	155°	9	0	0	0	0	4
0°-30°	733.9	17.0	7.7	165°	1	0	0	0	0	1
0°-40°	1262.7	29.3	13.3	175°	1	0	0	0	0	0
0°-60°	2364.5	54.8	24.9	180°	1	0	0	0	0	
0°-90°	4042.0	93.7	42.5							
90°-120°	254.1	5.9	2.7							
90°-150°	276.0	6.4	2.9							
90°-180°	276.0	6.4	2.9							
0°-180°	4314.4	100.0	45.4							



TEST NUMBER: 6580
 CATALOG NUMBER: HCS-100S

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	90°	105°
0°	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007
5°	1069	1049	1021	1034	1013	1009	1009	1013	1005	1001	973
10°	1041	1021	1021	1009	994	994	982	958	922	891	874
15°	998	990	978	973	942	910	866	838	811	802	791
20°	969	954	954	942	878	834	807	795	795	795	787
25°	966	942	958	938	874	822	791	767	764	735	735
30°	918	906	918	926	866	843	783	756	727	703	716
35°	895	878	882	895	886	878	815	739	707	712	730
40°	831	807	819	822	922	902	791	735	703	735	688
45°	712	706	716	747	827	834	751	640	589	549	577
50°	628	608	636	724	739	756	652	529	645	418	433
55°	564	545	604	720	730	720	593	454	378	358	362
60°	625	600	767	922	899	787	652	465	429	429	481
62.5°	699	692	1156	1220	1121	855	688	497	501	545	529
65°	735	756	1466	1486	1252	942	739	533	581	600	533
67.5°	811	851	1943	1724	1383	1077	815	628	652	663	560
70°	827	807	2097	1716	1387	1041	855	672	672	683	529
72.5°	730	727	1911	1490	1053	815	743	612	636	621	382
75°	537	557	1506	1133	775	600	497	422	429	311	298
77.5°	338	307	791	735	486	425	326	255	255	231	163
80°	199	211	425	458	374	294	235	168	155	128	116
82.5°	132	120	283	287	235	211	155	116	104	92	85
85°	128	116	263	247	216	176	128	100	85	72	68
87.5°	128	116	243	187	155	136	112	92	81	60	56
90°	124	116	231	190	159	136	116	92	76	56	56
95°	136	124	199	199	184	168	136	100	81	60	72
105°	116	108	140	152	116	112	92	76	60	45	56
115°	100	81	104	92	60	56	52	56	41	33	41
125°	37	24	17	17	17	20	20	17	13	13	9
135°	17	1	1	1	1	1	1	1	1	1	1
145°	13	1	0	0	0	0	0	0	0	0	0
155°	9	0	0	0	0	0	0	0	0	0	0
165°	1	0	0	0	0	0	0	0	0	0	0
175°	1	0	0	0	0	0	0	0	0	0	0
180°	1	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: 6580
 CATALOG NUMBER: HCS-100S

CANDELA DISTRIBUTION (continued):

	115°	125°	135°	145°	155°	165°	175°	180°
0°	1007	1007	1007	1007	1007	1007	1007	1007
5°	982	982	982	958	954	958	942	962
10°	886	899	899	886	891	891	886	870
15°	802	815	831	843	843	851	843	838
20°	815	827	859	855	870	874	870	870
25°	764	799	859	926	934	950	942	946
30°	760	822	922	982	1013	998	1009	1017
35°	771	859	982	998	966	926	978	998
40°	764	918	978	930	827	787	783	787
45°	683	863	914	811	688	577	549	564
50°	600	799	855	764	640	505	429	425
55°	525	791	918	846	672	481	378	370
60°	585	966	1109	1030	799	625	385	351
62.5°	589	986	1144	1165	1013	926	406	390
65°	608	982	1311	1287	1283	1053	378	374
67.5°	663	973	1422	1323	1304	1148	370	378
70°	648	910	1391	1315	1161	1252	370	362
72.5°	557	802	1005	978	950	918	287	294
75°	401	505	663	676	585	577	216	216
77.5°	259	351	362	410	358	311	152	152
80°	163	227	279	271	271	195	112	116
82.5°	116	171	195	199	203	155	60	60
85°	92	124	144	136	180	140	60	64
87.5°	76	100	116	116	144	124	56	56
90°	76	100	116	112	136	124	60	64
95°	85	100	108	92	108	100	52	56
105°	68	68	76	64	68	48	20	20
115°	52	64	48	45	48	28	17	17
125°	17	17	13	9	9	5	1	1
135°	1	1	1	0	0	0	0	0
145°	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0

(END OF REPORT)