

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: 766703

Luminaire Tested: **HPEW-70xxxx**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 766703
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: HPEW-70xxxx
Description: FAIL-SAFE WHITE 9 x 9
Light Source: #048 - 70W HPS CL HOR MED 6300 LUMENS
Ballast/Driver: -

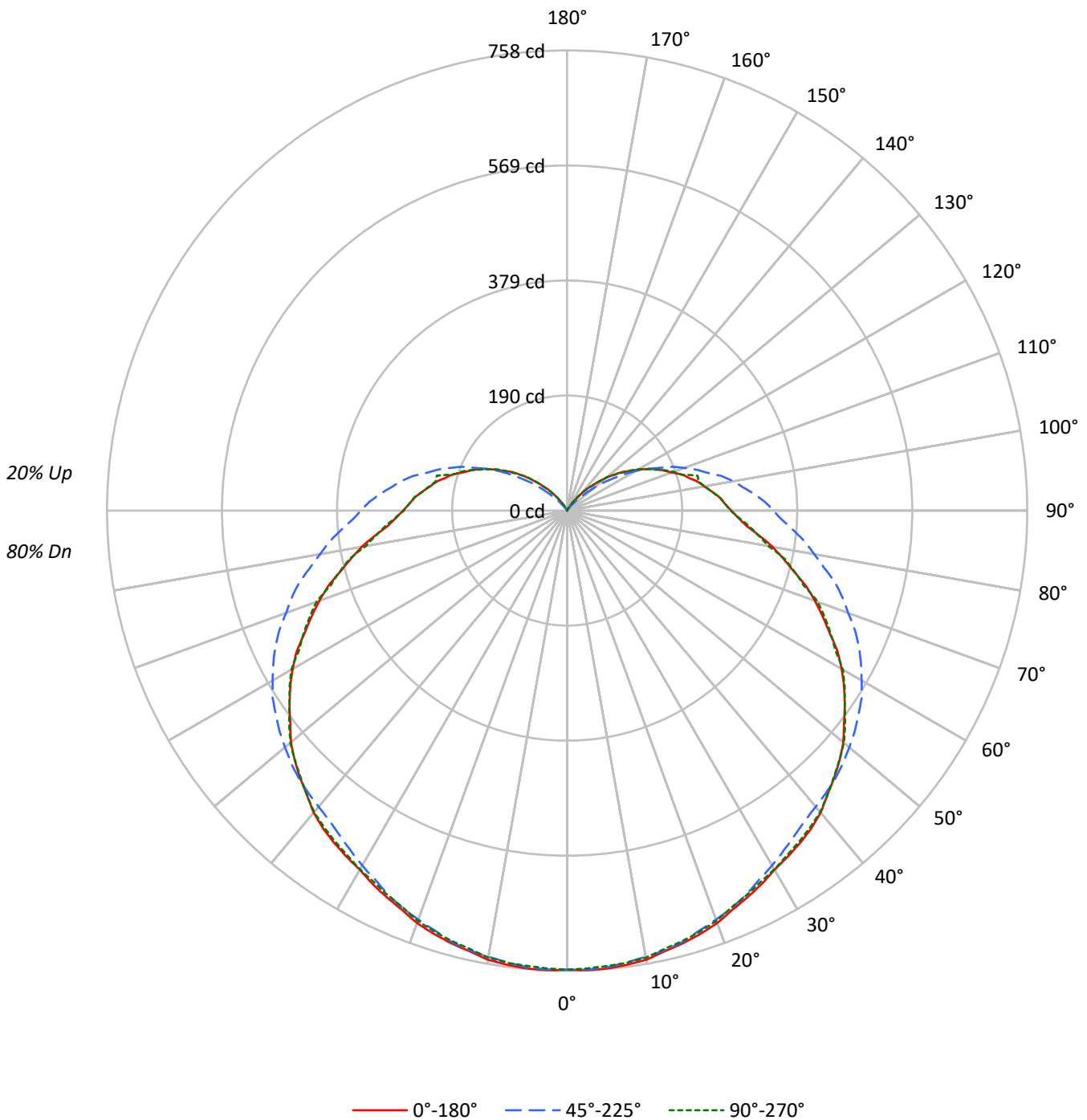
Summary

Lumens per Lamp: 6300 (1 lamp)
Luminaire Lumens: 4174.5 lumens
Efficiency: 66.3%
Efficacy: 59.6 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.36 / 1.55
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Semi-Direct

Input Watts (W): 70
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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Luminous Intensity Polar Plot





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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	76	76	76	76	72	72	72	72	66	66	66	61	61	61	55	55	55	53
1	66	62	58	55	63	59	56	53	54	51	49	49	47	45	44	43	41	39
2	59	53	47	43	56	50	45	41	46	42	38	41	38	35	37	35	32	30
3	53	45	39	34	51	43	38	33	39	35	31	36	32	29	32	29	26	24
4	49	40	33	28	46	38	32	27	34	29	26	31	27	24	28	25	22	20
5	44	35	29	24	42	34	28	23	31	26	22	28	24	20	25	22	19	17
6	41	31	25	20	39	30	24	20	27	22	19	25	21	17	23	19	16	14
7	38	28	22	18	36	27	21	17	25	20	16	23	18	15	21	17	14	13
8	35	26	20	16	33	25	19	15	23	18	14	21	16	13	19	15	13	11
9	33	23	18	14	31	22	17	14	21	16	13	19	15	12	17	14	11	10
10	30	21	16	12	29	21	16	12	19	15	11	18	14	11	16	13	10	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	Luminaire represents a point source (luminous area is zero).		
5°	No luminance values can be calculated.		
10°			
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	71.8	1.7	1.1	0°	756	756	756	756	756	
10°-20°	207.6	5.0	3.3	5°	757	754	755	754	753	72
20°-30°	322.6	7.7	5.1	15°	738	734	736	734	734	209
30°-40°	414.3	9.9	6.6	25°	703	698	698	698	699	325
40°-50°	480.5	11.5	7.6	35°	669	661	653	661	666	419
50°-60°	510.7	12.2	8.1	45°	622	621	624	621	621	481
60°-70°	501.2	12.0	8.0	55°	558	569	586	569	558	500
70°-80°	450.5	10.8	7.2	65°	477	507	530	510	479	474
80°-90°	375.6	9.0	6.0	75°	386	430	456	436	388	410
90°-100°	308.5	7.4	4.9	85°	297	348	375	349	301	253
100°-110°	236.6	5.7	3.8	90°	270	314	340	315	269	148
110°-120°	158.8	3.8	2.5	95°	252	285	310	285	252	201
120°-130°	89.1	2.1	1.4	105°	208	221	240	222	222	220
130°-140°	36.9	0.9	0.6	115°	162	156	166	156	159	159
140°-150°	8.5	0.2	0.1	125°	110	96	92	96	108	99
150°-160°	1.2	0.0	0.0	135°	58	48	30	48	57	47
160°-170°	0.2	0.0	0.0	145°	19	12	5	12	18	12
170°-180°	0.0	0.0	0.0	155°	3	2	2	2	3	1
0°-30°	602.0	14.4	9.6	165°	1	1	0	1	1	0
0°-40°	1016.3	24.3	16.1	175°	0	0	0	0	0	0
0°-60°	2007.4	48.1	31.9	180°	0	0	0	0	0	0
0°-90°	3334.7	79.9	52.9							
90°-120°	703.9	16.9	11.2							
90°-150°	838.3	20.1	13.3							
90°-180°	840.0	20.1	13.3							
0°-180°	4174.5	100.0	66.3							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	756.3	756.3	756.3	756.3	756.3
2.5°	757.9	755.2	756.7	755.4	754.7
5°	757.1	754.3	755.2	753.8	753.0
7.5°	754.8	750.2	750.4	751.3	751.4
10°	751.2	745.2	746.3	746.7	747.7
12.5°	743.3	740.6	741.9	740.5	739.6
15°	737.8	734.5	735.7	734.3	734.0
17.5°	730.9	725.7	725.2	727.4	727.2
20°	723.0	716.5	716.9	719.5	719.1
22.5°	711.5	707.4	708.4	706.9	707.5
25°	702.7	698.4	698.1	697.9	699.0
27.5°	693.6	685.2	685.3	688.9	689.8
30°	683.0	676.3	675.1	675.7	682.4
32.5°	676.0	667.7	663.9	667.9	673.5
35°	668.6	660.7	653.3	660.8	665.8
37.5°	660.2	650.6	643.5	653.3	657.6
40°	649.5	642.1	636.8	641.1	648.4
42.5°	634.6	631.8	631.1	631.1	635.1
45°	622.2	620.6	624.5	621.0	621.0
47.5°	608.6	606.5	616.4	608.6	608.4
50°	593.8	594.8	606.7	594.5	595.1
52.5°	574.8	581.2	597.1	581.2	577.1
55°	558.3	569.2	585.8	569.1	558.3
57.5°	540.8	552.6	575.1	553.5	542.0
60°	522.0	539.3	560.1	538.9	524.7
62.5°	502.2	524.0	545.8	524.9	497.8
65°	476.9	507.4	530.3	510.5	479.1
67.5°	455.6	489.7	513.0	489.5	459.4
70°	434.4	470.9	492.6	470.5	439.2
72.5°	412.4	451.4	475.6	453.4	408.2
75°	386.2	429.7	456.5	435.9	387.7
77.5°	364.3	408.8	433.5	408.1	366.8
80°	343.5	390.7	413.2	389.6	336.9
82.5°	319.9	368.9	395.3	371.4	318.4
85°	297.0	347.5	374.6	348.6	301.3
87.5°	282.3	331.6	354.2	330.0	283.8
90°	270.2	314.1	339.5	315.4	268.8
92.5°	259.9	297.8	326.2	302.1	260.4
95°	251.6	285.1	309.7	285.1	252.5
97.5°	240.4	276.3	292.6	269.5	239.5
100°	229.2	251.4	278.1	255.7	230.3
102.5°	220.1	237.5	261.1	236.9	221.5
105°	207.8	221.0	239.8	222.4	222.4
107.5°	197.9	203.3	223.6	205.3	196.7
110°	183.2	187.3	205.1	189.4	186.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	172.3	170.3	188.5	170.6	173.9
115°	161.6	155.5	165.8	155.6	159.3
117.5°	147.8	138.5	149.0	139.0	147.8
120°	134.9	120.6	130.1	124.0	136.2
122.5°	121.1	108.0	111.4	108.2	123.0
125°	110.4	95.9	92.0	96.0	107.6
127.5°	96.6	82.8	76.6	84.4	96.2
130°	84.2	68.5	60.1	71.1	84.8
132.5°	71.0	58.1	44.5	57.8	71.5
135°	58.2	47.9	30.2	47.6	57.1
137.5°	48.7	36.8	20.4	37.9	46.7
140°	37.2	28.0	12.5	27.0	36.6
142.5°	25.4	20.2	6.4	19.2	27.6
145°	18.8	11.6	5.3	12.3	18.5
147.5°	11.3	6.7	4.5	6.4	9.9
150°	5.9	3.6	3.9	3.6	5.4
152.5°	3.3	2.9	3.3	3.1	3.4
155°	2.6	2.4	2.3	2.5	2.9
157.5°	2.0	1.7	1.7	1.9	2.5
160°	1.7	1.4	1.0	1.4	1.7
162.5°	1.2	1.0	0.6	0.9	1.2
165°	0.8	0.7	0.4	0.6	0.8
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)