

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: BALL 4690

Luminaire Tested: **HMS24CR-250S**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: BALL 4690
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: HMS24CR-250S
Description:
Light Source: -
S50VC-250
Ballast/Driver: -

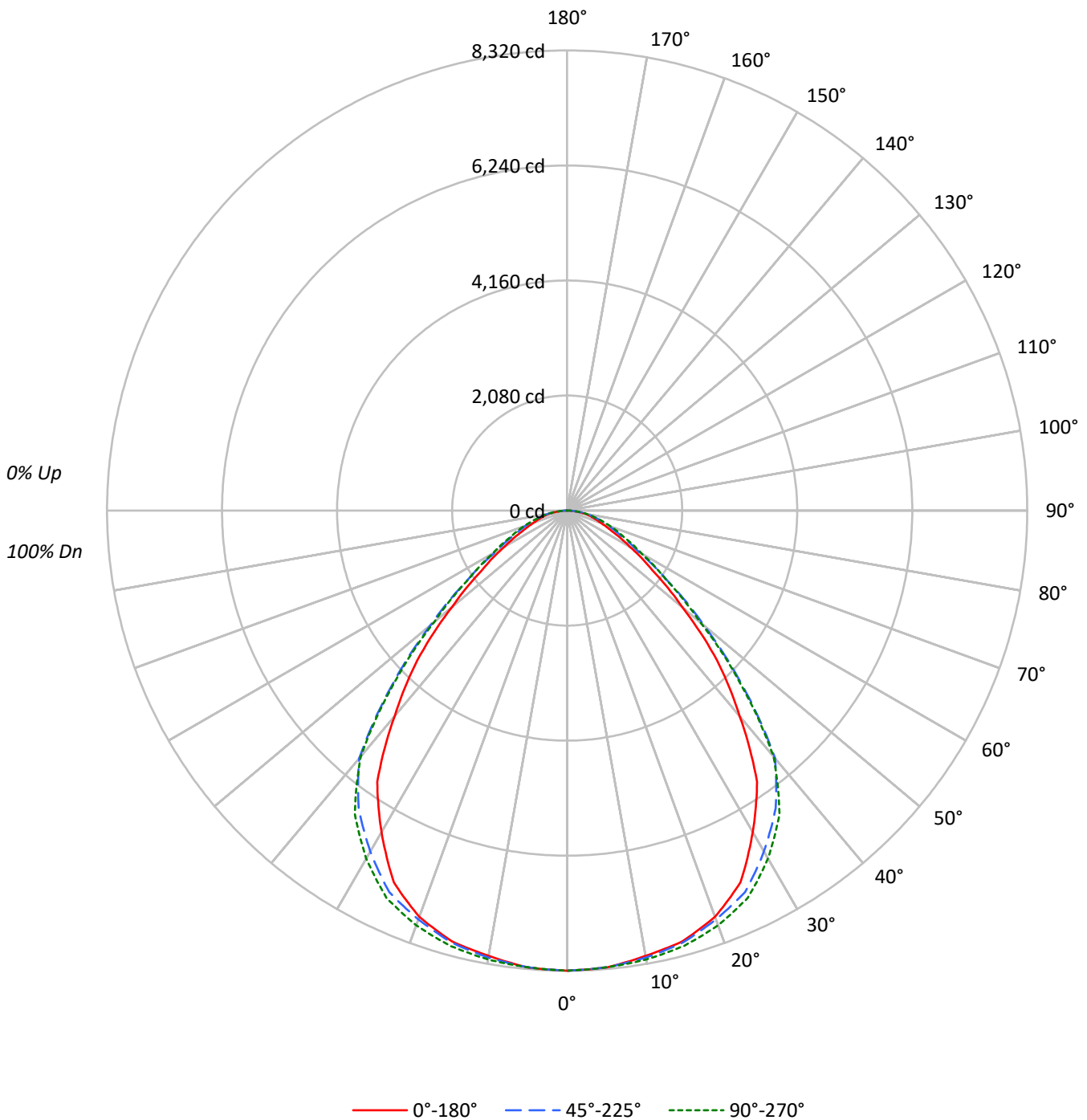
Summary

Lumens per Lamp: 26000 (1 lamp)
Luminaire Lumens: 17742.0 lumens
Efficiency: 68.2%
Efficacy: 58.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.3
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 303
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	50	30	10	0	
RCR																						
0	81	81	81	81	79	79	79	79	76	76	76	73	73	73	70	70	70	70	70	70	68	
1	75	73	70	68	74	71	69	67	68	67	65	66	64	63	63	62	61	63	62	61	60	
2	70	65	61	58	68	64	60	57	61	58	56	59	57	54	57	55	53	57	55	53	52	
3	64	58	53	50	63	57	53	49	55	51	48	53	50	47	52	49	47	52	49	47	45	
4	60	52	47	43	58	52	47	43	50	46	42	48	45	42	47	44	41	47	44	41	40	
5	55	47	42	38	54	47	42	38	45	41	37	44	40	37	43	39	37	43	39	37	35	
6	51	43	38	34	50	43	37	34	41	37	33	40	36	33	39	36	33	39	36	33	32	
7	48	40	34	30	47	39	34	30	38	33	30	37	33	30	36	32	30	36	32	30	28	
8	45	36	31	27	44	36	31	27	35	30	27	34	30	27	33	30	27	33	30	27	26	
9	42	34	28	25	41	33	28	25	32	28	25	32	28	25	31	27	24	31	27	24	23	
10	39	31	26	23	39	31	26	23	30	26	23	29	25	22	29	25	22	29	25	22	21	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22389	22389	22389
5°	22393	22388	22388
10°	22341	22423	22518
15°	22460	22524	22705
20°	22385	22529	22852
25°	22025	22604	22943
30°	20856	22114	22574
35°	19668	21590	21990
40°	17058	20547	20402
45°	14583	17087	16901
50°	11375	13489	13141
55°	8811	10387	10270
60°	7045	8014	8364
65°	5750	6832	7202
70°	5059	6184	6593
75°	4897	5926	5926
80°	5036	5656	5656
85°	3767	5249	5311



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	788.9	4.4	3.0	0°	8320	8320	8320	8320	8320	
10°-20°	2283.5	12.9	8.8	5°	8290	8290	8288	8296	8288	788
20°-30°	3472.6	19.6	13.4	15°	8062	8062	8085	8127	8150	2272
30°-40°	3986.4	22.5	15.3	25°	7418	7458	7613	7695	7727	3386
40°-50°	3326.2	18.7	12.8	35°	5987	6147	6572	6727	6694	3679
50°-60°	2005.8	11.3	7.7	45°	3832	4042	4490	4621	4441	2932
60°-70°	1106.8	6.2	4.3	55°	1878	2212	2214	2286	2189	1736
70°-80°	581.6	3.3	2.2	65°	903	1163	1073	1148	1131	929
80°-90°	190.1	1.1	0.7	75°	471	528	570	561	570	504
90°-100°	0.0	0.0	0.0	85°	122	180	170	187	172	155
100°-110°	0.0	0.0	0.0	90°	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°-30°	6545.1	36.9	25.2							
0°-40°	10531.4	59.4	40.5							
0°-60°	15863.4	89.4	61.0							
0°-90°	17742.0	100.0	68.2							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	17742.0	100.0	68.2							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8320	8320	8320	8320	8320
5°	8290	8290	8288	8296	8288
10°	8176	8191	8206	8240	8241
15°	8062	8062	8085	8127	8150
20°	7817	7802	7867	7938	7980
25°	7418	7458	7613	7695	7727
30°	6712	6824	7117	7240	7265
35°	5987	6147	6572	6727	6694
40°	4856	5068	5849	5914	5808
45°	3832	4042	4490	4621	4441
50°	2717	3009	3222	3245	3139
55°	1878	2212	2214	2286	2189
60°	1309	1563	1489	1586	1554
65°	903	1163	1073	1148	1131
70°	643	740	786	765	838
75°	471	528	570	561	570
80°	325	350	365	365	365
85°	122	180	170	187	172
90°	0	0	0	0	0

(END OF REPORT)