

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: P312538

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-HRP-CP250-W2A-U-4500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P312538
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-34HE-UNV-L83050-HRP-CP250-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 4500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2451.0 lumens
Efficiency: N/A
Efficacy: 84.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

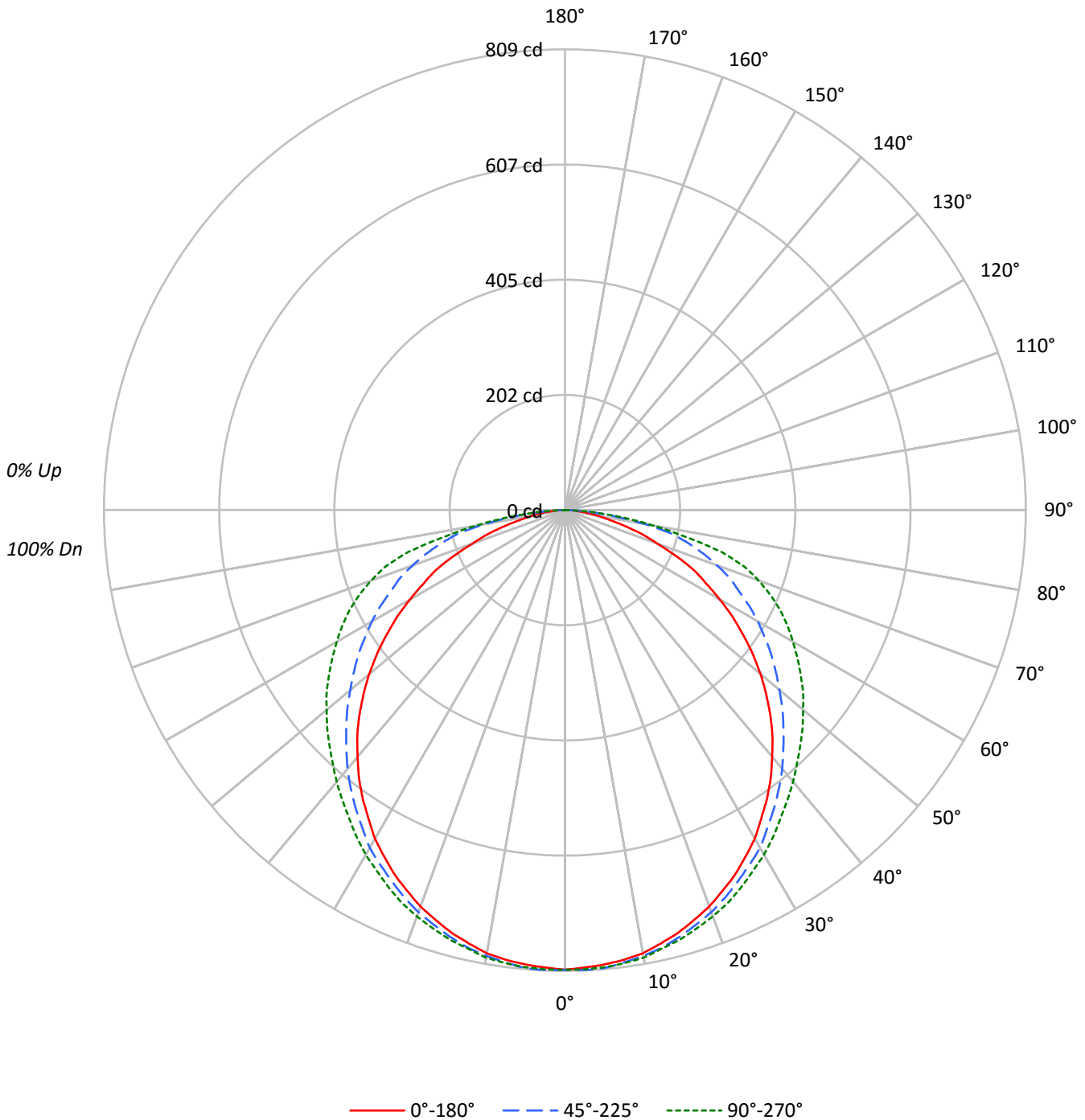
Input Watts (W): 29
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2172	2172	2172
5°	2163	2180	2176
10°	2159	2172	2180
15°	2141	2162	2175
20°	2121	2152	2174
25°	2098	2135	2171
30°	2071	2128	2172
35°	2032	2103	2169
40°	1988	2086	2189
45°	1942	2065	2224
50°	1877	2058	2285
55°	1792	2075	2372
60°	1689	2105	2488
65°	1595	2146	2658
70°	1363	2238	2847
75°	1142	2331	2958
80°	934	2252	2469
85°	812	1670	1815



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.5	3.1
10°-20°	218.8	8.9
20°-30°	331.6	13.5
30°-40°	400.4	16.3
40°-50°	420.7	17.2
50°-60°	395.9	16.2
60°-70°	330.1	13.5
70°-80°	218.7	8.9
80°-90°	58.3	2.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	626.9	25.6
0°-40°	1027.3	41.9
0°-60°	1843.9	75.2
0°-90°	2451.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2451.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	807	807	807	807	807	
5°	801	802	807	807	806	76
15°	768	772	776	779	781	217
25°	707	711	719	728	731	325
35°	618	625	640	654	660	387
45°	510	518	543	570	584	393
55°	382	399	442	487	506	342
65°	250	272	337	393	418	244
75°	110	153	224	271	284	119
85°	26	40	54	59	59	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	807.1	807.1	807.1	807.1	807.1
2.5°	804.0	805.5	808.6	808.6	807.1
5°	800.9	802.4	807.1	807.1	805.5
7.5°	796.3	797.8	800.9	804.0	802.4
10°	790.1	791.6	794.7	797.8	797.8
12.5°	779.3	780.8	787.0	788.5	788.5
15°	768.4	771.5	776.2	779.3	780.8
17.5°	754.5	757.6	763.8	770.0	770.0
20°	740.6	743.7	751.4	757.6	759.2
22.5°	723.6	728.2	736.0	743.7	746.8
25°	706.6	711.2	719.0	728.2	731.3
27.5°	686.5	691.1	701.9	712.8	714.3
30°	666.4	671.0	684.9	694.2	698.9
32.5°	641.6	647.8	661.7	675.7	680.3
35°	618.5	624.6	640.1	654.0	660.2
37.5°	593.7	599.9	616.9	633.9	641.6
40°	565.9	573.6	593.7	612.3	623.1
42.5°	539.6	547.3	567.4	592.2	603.0
45°	510.2	518.0	542.7	570.5	584.4
47.5°	479.3	488.6	518.0	552.0	565.9
50°	448.4	459.2	491.7	530.3	545.8
52.5°	415.9	429.8	466.9	508.7	527.2
55°	381.9	398.9	442.2	487.0	505.6
57.5°	349.4	364.9	415.9	463.8	483.9
60°	313.9	334.0	391.2	440.7	462.3
62.5°	279.9	301.5	364.9	417.5	440.7
65°	250.5	272.1	337.1	392.7	417.5
67.5°	211.8	241.2	313.9	366.4	391.2
70°	173.2	213.4	284.5	338.6	361.8
72.5°	143.8	182.4	255.1	309.2	330.9
75°	109.8	153.1	224.2	270.6	284.5
77.5°	81.9	126.8	191.7	214.9	216.5
80°	60.3	97.4	145.3	153.1	159.3
82.5°	41.7	68.0	94.3	103.6	106.7
85°	26.3	40.2	54.1	58.8	58.8
87.5°	13.9	15.5	18.6	18.6	18.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)