

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: P312535

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-HRP-CP250-W2A-U-3000K**

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: P312535
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-3000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 3000K 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: 2185.0 lumens
Efficiency: N/A
Efficacy: 79.5 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

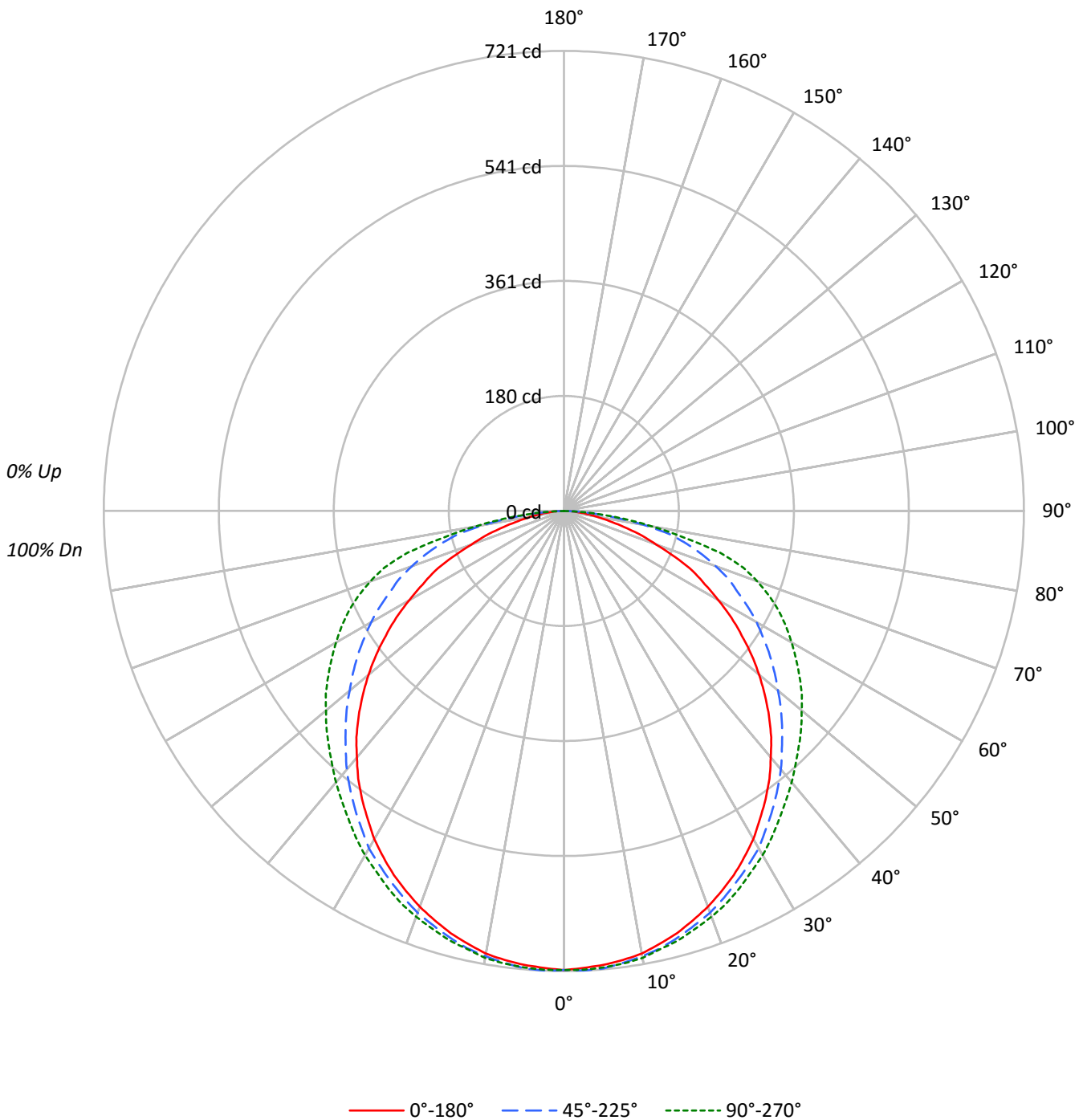
Input Watts (W): 27.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1936	1936	1936
5°	1929	1944	1940
10°	1924	1936	1943
15°	1908	1928	1939
20°	1891	1918	1938
25°	1870	1903	1936
30°	1846	1897	1936
35°	1811	1874	1934
40°	1772	1859	1951
45°	1731	1841	1983
50°	1673	1835	2037
55°	1597	1849	2114
60°	1506	1877	2218
65°	1422	1913	2370
70°	1215	1995	2537
75°	1018	2078	2637
80°	834	2008	2201
85°	722	1488	1618



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.2	3.1
10°-20°	195.1	8.9
20°-30°	295.6	13.5
30°-40°	357.0	16.3
40°-50°	375.1	17.2
50°-60°	352.9	16.2
60°-70°	294.3	13.5
70°-80°	195.0	8.9
80°-90°	52.0	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°	558.9	25.6
0°-40°	915.8	41.9
0°-60°	1643.8	75.2
0°-90°	2185.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2185.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	720	720	720	720	720	
5°	714	715	720	720	718	68
15°	685	688	692	695	696	193
25°	630	634	641	649	652	290
35°	551	557	571	583	589	345
45°	455	462	484	509	521	350
55°	340	356	394	434	451	305
65°	223	243	300	350	372	217
75°	98	136	200	241	254	106
85°	23	36	48	52	52	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	719.5	719.5	719.5	719.5	719.5
2.5°	716.7	718.1	720.9	720.9	719.5
5°	714.0	715.4	719.5	719.5	718.1
7.5°	709.8	711.2	714.0	716.7	715.4
10°	704.3	705.7	708.5	711.2	711.2
12.5°	694.7	696.1	701.6	703.0	703.0
15°	685.0	687.8	691.9	694.7	696.1
17.5°	672.6	675.4	680.9	686.4	686.4
20°	660.2	663.0	669.9	675.4	676.8
22.5°	645.1	649.2	656.1	663.0	665.7
25°	629.9	634.0	640.9	649.2	652.0
27.5°	612.0	616.1	625.8	635.4	636.8
30°	594.1	598.2	610.6	618.9	623.0
32.5°	572.0	577.5	589.9	602.3	606.5
35°	551.3	556.9	570.6	583.0	588.6
37.5°	529.3	534.8	550.0	565.1	572.0
40°	504.5	511.4	529.3	545.8	555.5
42.5°	481.0	487.9	505.9	527.9	537.6
45°	454.9	461.7	483.8	508.6	521.0
47.5°	427.3	435.6	461.7	492.1	504.5
50°	399.7	409.4	438.3	472.8	486.6
52.5°	370.8	383.2	416.3	453.5	470.0
55°	340.5	355.6	394.2	434.2	450.7
57.5°	311.5	325.3	370.8	413.5	431.4
60°	279.8	297.7	348.7	392.8	412.1
62.5°	249.5	268.8	325.3	372.2	392.8
65°	223.3	242.6	300.5	350.1	372.2
67.5°	188.8	215.0	279.8	326.7	348.7
70°	154.4	190.2	253.6	301.9	322.5
72.5°	128.2	162.6	227.4	275.7	295.0
75°	97.9	136.5	199.9	241.2	253.6
77.5°	73.1	113.0	170.9	191.6	193.0
80°	53.8	86.8	129.6	136.5	142.0
82.5°	37.2	60.6	84.1	92.3	95.1
85°	23.4	35.8	48.2	52.4	52.4
87.5°	12.4	13.8	16.5	16.5	16.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)