

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: P308232

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-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: P308232
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-L82765-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: 2107.0 lumens
Efficiency: N/A
Efficacy: 76.9 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

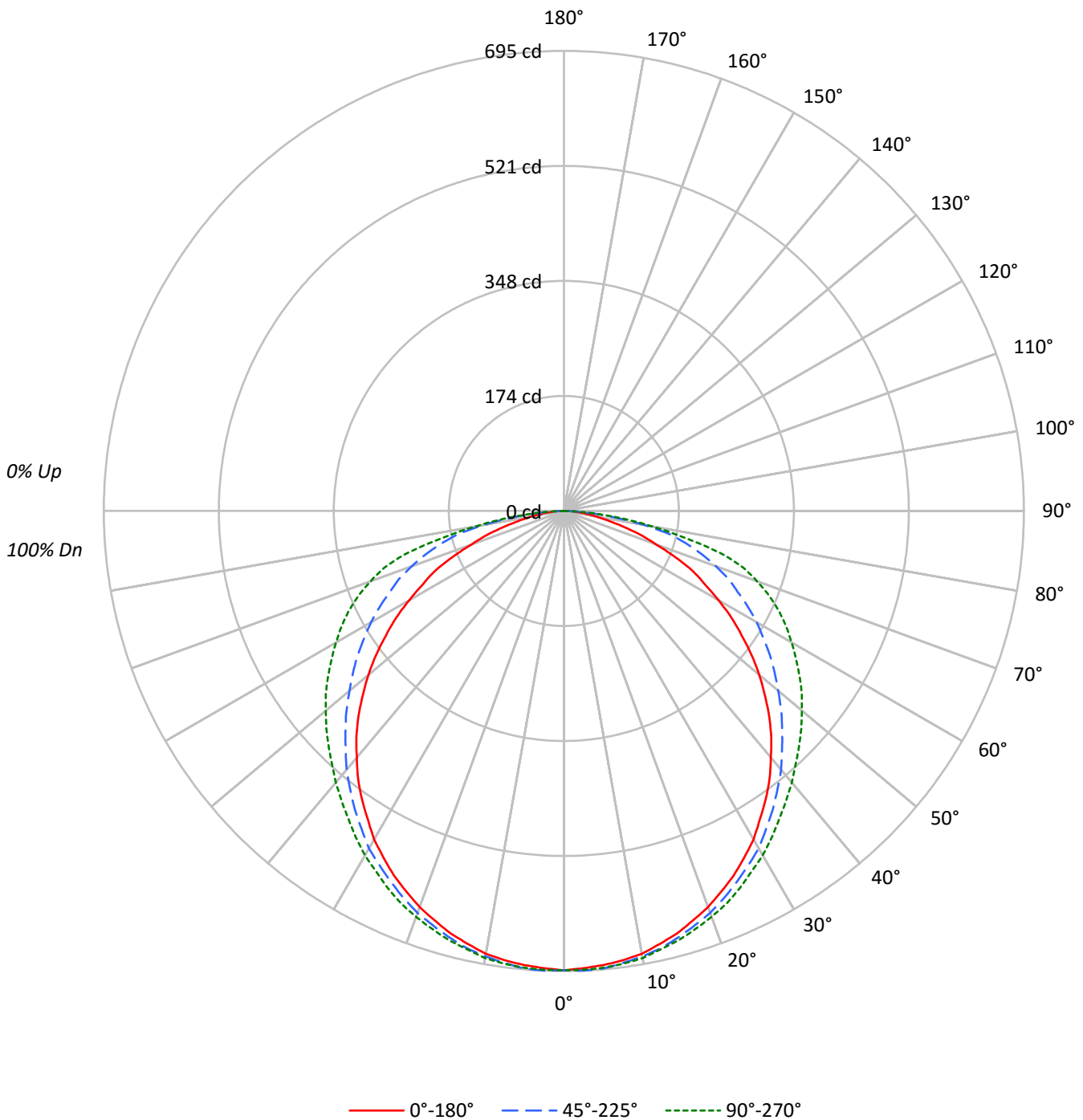
Input Watts (W): 27.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1867	1867	1867
5°	1860	1874	1871
10°	1856	1867	1874
15°	1840	1859	1870
20°	1823	1850	1869
25°	1803	1835	1867
30°	1780	1830	1867
35°	1747	1808	1864
40°	1709	1793	1881
45°	1669	1775	1912
50°	1614	1770	1964
55°	1540	1783	2039
60°	1452	1810	2139
65°	1371	1845	2285
70°	1172	1924	2447
75°	981	2004	2543
80°	803	1936	2122
85°	698	1436	1559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.8	3.1
10°-20°	188.1	8.9
20°-30°	285.1	13.5
30°-40°	344.2	16.3
40°-50°	361.7	17.2
50°-60°	340.3	16.2
60°-70°	283.8	13.5
70°-80°	188.0	8.9
80°-90°	50.1	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°	538.9	25.6
0°-40°	883.1	41.9
0°-60°	1585.1	75.2
0°-90°	2107.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2107.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	694	694	694	694	694	
5°	688	690	694	694	692	65
15°	661	663	667	670	671	186
25°	607	611	618	626	629	280
35°	532	537	550	562	568	332
45°	439	445	466	490	502	338
55°	328	343	380	419	435	294
65°	215	234	290	338	359	210
75°	94	132	193	233	245	102
85°	23	35	46	50	50	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	693.8	693.8	693.8	693.8	693.8
2.5°	691.2	692.5	695.1	695.1	693.8
5°	688.5	689.8	693.8	693.8	692.5
7.5°	684.5	685.8	688.5	691.2	689.8
10°	679.2	680.5	683.2	685.8	685.8
12.5°	669.9	671.2	676.5	677.9	677.9
15°	660.6	663.2	667.2	669.9	671.2
17.5°	648.6	651.3	656.6	661.9	661.9
20°	636.7	639.3	646.0	651.3	652.6
22.5°	622.0	626.0	632.7	639.3	642.0
25°	607.4	611.4	618.1	626.0	628.7
27.5°	590.1	594.1	603.4	612.7	614.1
30°	572.9	576.8	588.8	596.8	600.8
32.5°	551.6	556.9	568.9	580.8	584.8
35°	531.7	537.0	550.3	562.2	567.5
37.5°	510.4	515.7	530.3	544.9	551.6
40°	486.5	493.1	510.4	526.3	535.6
42.5°	463.9	470.5	487.8	509.1	518.4
45°	438.6	445.3	466.5	490.5	502.4
47.5°	412.0	420.0	445.3	474.5	486.5
50°	385.5	394.8	422.7	455.9	469.2
52.5°	357.5	369.5	401.4	437.3	453.2
55°	328.3	342.9	380.1	418.7	434.6
57.5°	300.4	313.7	357.5	398.7	416.0
60°	269.8	287.1	336.3	378.8	397.4
62.5°	240.6	259.2	313.7	358.9	378.8
65°	215.3	233.9	289.8	337.6	358.9
67.5°	182.1	207.3	269.8	315.0	336.3
70°	148.9	183.4	244.6	291.1	311.0
72.5°	123.6	156.8	219.3	265.8	284.4
75°	94.4	131.6	192.7	232.6	244.6
77.5°	70.4	109.0	164.8	184.8	186.1
80°	51.8	83.7	124.9	131.6	136.9
82.5°	35.9	58.5	81.1	89.1	91.7
85°	22.6	34.6	46.5	50.5	50.5
87.5°	12.0	13.3	15.9	15.9	15.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)