

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: P308549

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-RDP-CP250-W2A-U-4000K**

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: P308549
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-39HE-UNV-L82765-RDP-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 2199.0 lumens
Efficiency: N/A
Efficacy: 67.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

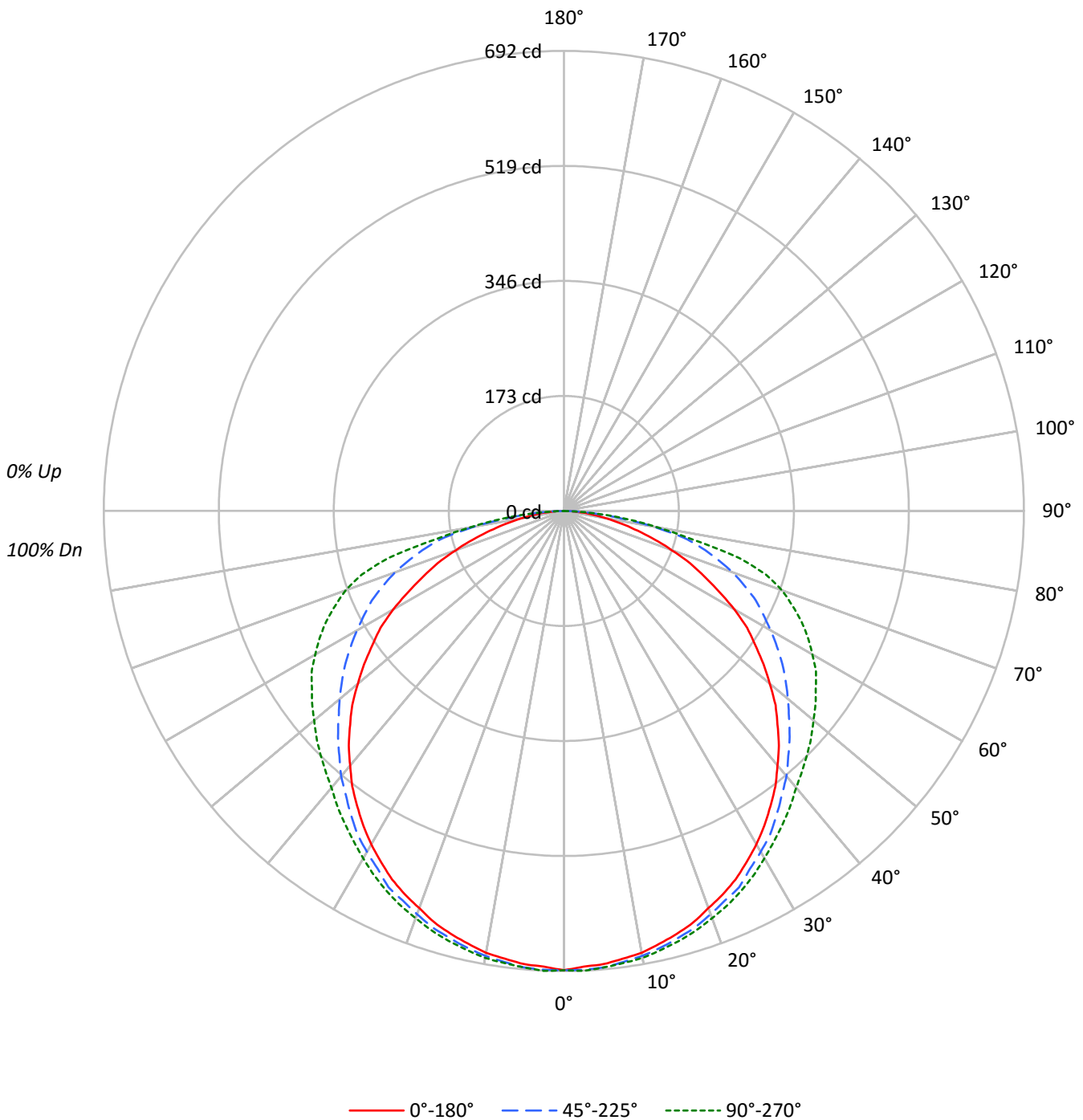
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1859	1859	1859
5°	1848	1861	1861
10°	1843	1856	1865
15°	1834	1852	1866
20°	1820	1848	1867
25°	1816	1854	1873
30°	1799	1840	1875
35°	1780	1833	1887
40°	1756	1830	1909
45°	1730	1828	1970
50°	1693	1842	2052
55°	1647	1882	2171
60°	1593	1933	2324
65°	1483	2029	2513
70°	1362	2126	2749
75°	1195	2236	2843
80°	1027	2131	2232
85°	898	1547	1698



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.3	3.0
10°-20°	187.6	8.5
20°-30°	286.2	13.0
30°-40°	349.5	15.9
40°-50°	373.7	17.0
50°-60°	360.7	16.4
60°-70°	310.5	14.1
70°-80°	210.1	9.6
80°-90°	55.4	2.5
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°	539.2	24.5
0°-40°	888.7	40.4
0°-60°	1623.0	73.8
0°-90°	2199.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2199.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	691	691	691	691	691	
5°	684	686	689	689	689	65
15°	658	660	665	668	670	186
25°	612	615	624	628	631	281
35°	542	547	558	569	574	339
45°	455	463	480	505	518	351
55°	351	362	401	442	463	315
65°	233	256	319	369	395	232
75°	115	152	215	259	273	123
85°	29	40	50	52	55	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	690.7	690.7	690.7	690.7	690.7
2.5°	685.9	687.5	690.7	690.7	692.4
5°	684.3	685.9	689.1	689.1	689.1
7.5°	679.4	681.0	684.3	685.9	685.9
10°	674.6	676.2	679.4	681.0	682.7
12.5°	666.5	668.1	672.9	676.2	676.2
15°	658.4	660.0	664.9	668.1	669.7
17.5°	648.7	651.9	656.8	660.0	661.6
20°	635.7	639.0	645.4	650.3	651.9
22.5°	624.4	627.7	634.1	639.0	642.2
25°	611.5	614.7	624.4	627.7	630.9
27.5°	595.3	598.5	606.6	613.1	617.9
30°	579.1	582.4	592.1	600.2	603.4
32.5°	561.3	566.2	577.5	584.0	588.8
35°	541.9	546.8	558.1	569.4	574.3
37.5°	522.5	527.4	538.7	553.2	559.7
40°	499.9	506.3	520.9	540.3	543.5
42.5°	478.8	486.9	499.9	522.5	530.6
45°	454.6	462.7	480.4	504.7	517.7
47.5°	431.9	440.0	459.4	488.5	504.7
50°	404.4	415.7	440.0	474.0	490.2
52.5°	378.5	388.2	420.6	457.8	477.2
55°	351.0	362.4	401.2	441.6	462.7
57.5°	326.8	336.5	380.2	425.4	449.7
60°	296.0	309.0	359.1	407.7	431.9
62.5°	263.7	283.1	338.1	388.2	414.1
65°	232.9	255.6	318.7	368.8	394.7
67.5°	205.4	229.7	294.4	347.8	372.1
70°	173.1	203.8	270.2	321.9	349.4
72.5°	144.0	177.9	242.7	294.4	318.7
75°	114.9	152.1	215.1	258.8	273.4
77.5°	89.0	124.6	184.4	197.4	199.0
80°	66.3	98.7	137.5	139.1	144.0
82.5°	45.3	69.6	89.0	97.1	98.7
85°	29.1	40.4	50.1	51.8	55.0
87.5°	12.9	14.6	17.8	16.2	16.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)