

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: P312692

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-RDP-CA08-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: P312692
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-L83050-RDP-CA08-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 2493.0 lumens
Efficiency: N/A
Efficacy: 75.3 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

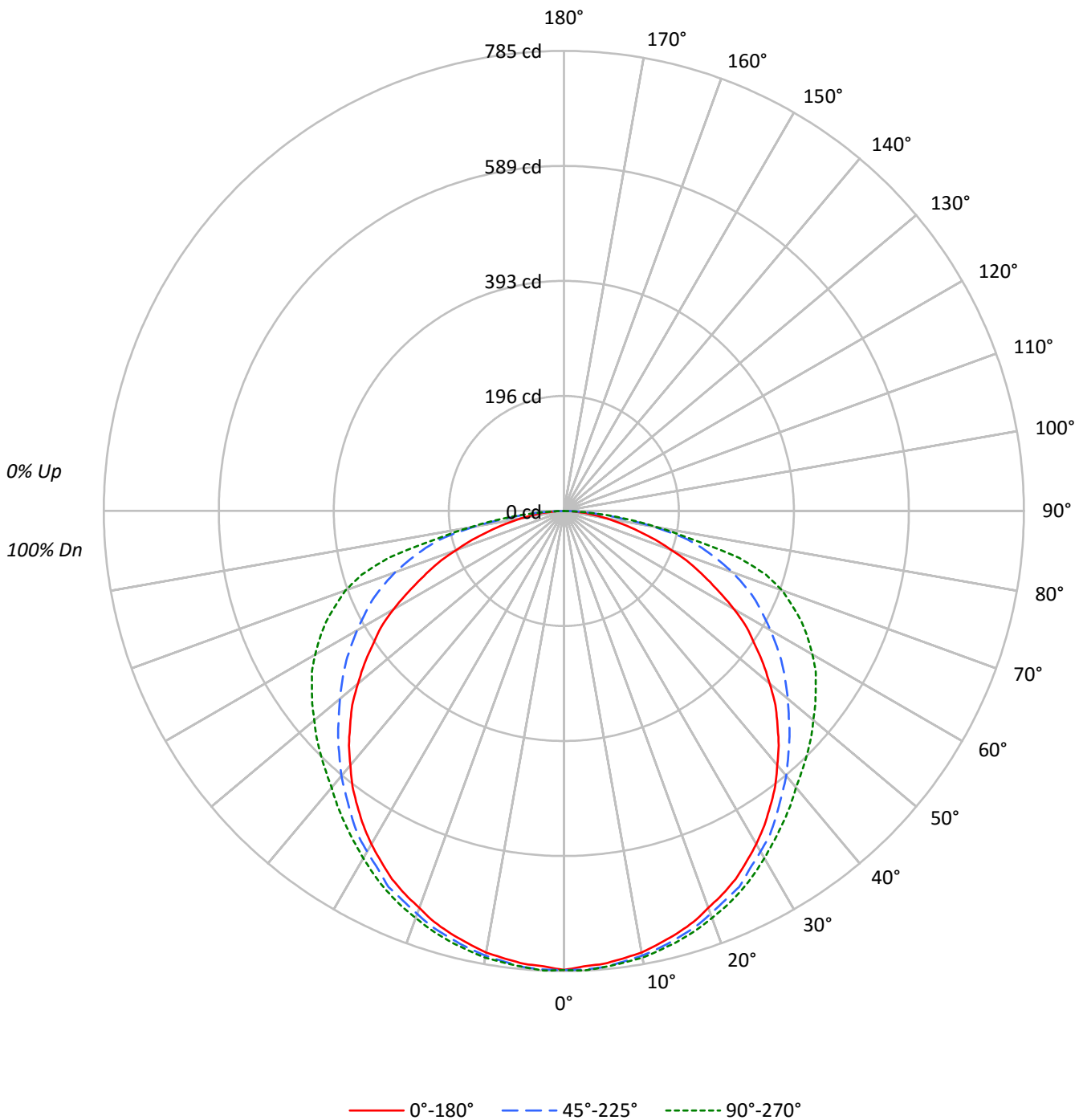
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2107	2107	2107
5°	2096	2110	2110
10°	2090	2105	2115
15°	2079	2100	2115
20°	2064	2095	2117
25°	2058	2102	2124
30°	2040	2086	2126
35°	2018	2078	2139
40°	1991	2074	2165
45°	1961	2073	2234
50°	1919	2088	2326
55°	1867	2134	2461
60°	1806	2191	2636
65°	1682	2301	2849
70°	1544	2410	3116
75°	1354	2536	3222
80°	1165	2416	2529
85°	1019	1757	1927



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.1	3.0
10°-20°	212.7	8.5
20°-30°	324.5	13.0
30°-40°	396.2	15.9
40°-50°	423.6	17.0
50°-60°	408.9	16.4
60°-70°	352.0	14.1
70°-80°	238.2	9.6
80°-90°	62.8	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°	611.3	24.5
0°-40°	1007.5	40.4
0°-60°	1840.0	73.8
0°-90°	2493.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2493.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	783	783	783	783	783	
5°	776	778	781	781	781	74
15°	746	748	754	757	759	211
25°	693	697	708	712	715	319
35°	614	620	633	646	651	384
45°	515	524	545	572	587	398
55°	398	411	455	501	524	357
65°	264	290	361	418	448	263
75°	130	172	244	293	310	140
85°	33	46	57	59	62	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	783.1	783.1	783.1	783.1	783.1
2.5°	777.6	779.4	783.1	783.1	784.9
5°	775.8	777.6	781.3	781.3	781.3
7.5°	770.3	772.1	775.8	777.6	777.6
10°	764.8	766.6	770.3	772.1	773.9
12.5°	755.6	757.4	762.9	766.6	766.6
15°	746.4	748.2	753.8	757.4	759.3
17.5°	735.4	739.1	744.6	748.2	750.1
20°	720.7	724.4	731.7	737.2	739.1
22.5°	707.9	711.6	718.9	724.4	728.1
25°	693.2	696.9	707.9	711.6	715.2
27.5°	674.9	678.6	687.7	695.1	700.6
30°	656.6	660.2	671.2	680.4	684.1
32.5°	636.4	641.9	654.7	662.1	667.6
35°	614.4	619.9	632.7	645.5	651.1
37.5°	592.4	597.9	610.7	627.2	634.5
40°	566.7	574.0	590.5	612.5	616.2
42.5°	542.8	552.0	566.7	592.4	601.5
45°	515.3	524.5	544.7	572.2	586.9
47.5°	489.7	498.8	520.8	553.9	572.2
50°	458.5	471.3	498.8	537.3	555.7
52.5°	429.1	440.1	476.8	519.0	541.0
55°	398.0	410.8	454.8	500.7	524.5
57.5°	370.5	381.5	431.0	482.3	509.8
60°	335.6	350.3	407.1	462.2	489.7
62.5°	298.9	320.9	383.3	440.1	469.5
65°	264.1	289.8	361.3	418.1	447.5
67.5°	232.9	260.4	333.8	394.3	421.8
70°	196.2	231.1	306.3	365.0	396.1
72.5°	163.2	201.7	275.1	333.8	361.3
75°	130.2	172.4	243.9	293.4	309.9
77.5°	100.9	141.2	209.1	223.7	225.6
80°	75.2	111.9	155.9	157.7	163.2
82.5°	51.4	78.9	100.9	110.0	111.9
85°	33.0	45.8	56.9	58.7	62.4
87.5°	14.7	16.5	20.2	18.3	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)