

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: P308808

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CP187-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: P308808
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CP187-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" 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: 3134.0 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

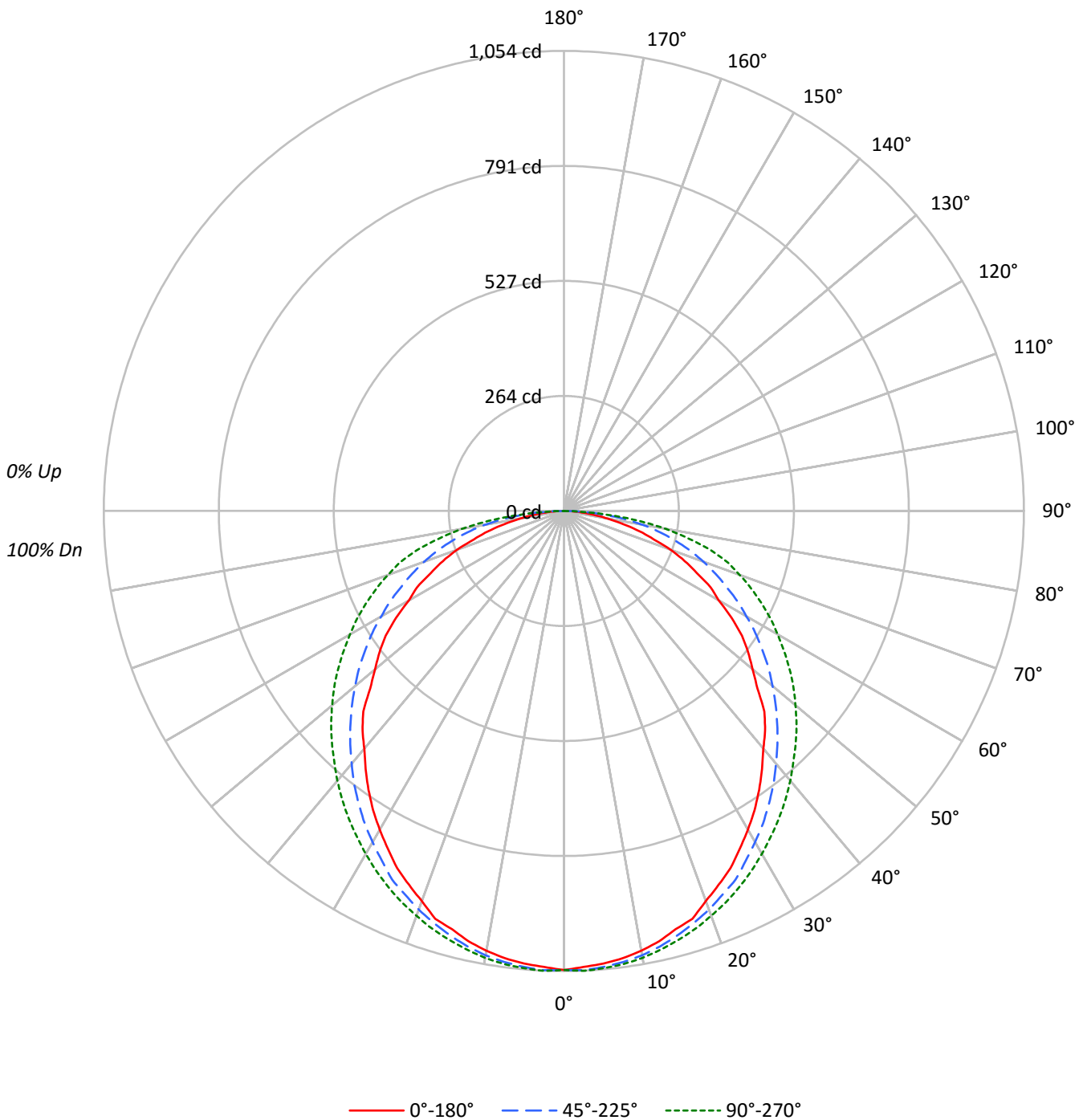
Input Watts (W): 32.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	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	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
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	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2830	2830	2830
5°	2812	2832	2840
10°	2795	2824	2840
15°	2762	2804	2833
20°	2723	2783	2826
25°	2681	2766	2824
30°	2619	2722	2820
35°	2562	2690	2824
40°	2498	2656	2835
45°	2472	2632	2860
50°	2361	2612	2901
55°	2336	2604	2963
60°	2204	2599	3043
65°	2139	2617	3181
70°	2054	2679	3375
75°	1871	2760	3634
80°	1604	2859	3673
85°	1297	2732	3149



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.5	3.2
10°-20°	283.8	9.1
20°-30°	427.2	13.6
30°-40°	512.7	16.4
40°-50°	535.9	17.1
50°-60°	499.4	15.9
60°-70°	409.6	13.1
70°-80°	276.0	8.8
80°-90°	89.9	2.9
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°	810.5	25.9
0°-40°	1323.2	42.2
0°-60°	2358.5	75.3
0°-90°	3134.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3134.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1052	1052	1052	1052	1052	
5°	1041	1044	1048	1050	1052	99
15°	992	998	1006	1016	1017	280
25°	903	909	932	945	951	415
35°	780	790	819	848	860	488
45°	650	654	692	734	752	496
55°	498	507	555	608	632	441
65°	336	351	411	471	500	334
75°	180	200	266	326	350	189
85°	42	60	88	104	102	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1051.5	1051.5	1051.5	1051.5	1051.5
2.5°	1045.5	1048.5	1053.0	1054.5	1054.5
5°	1041.0	1044.0	1048.5	1050.0	1051.5
7.5°	1033.5	1036.5	1042.5	1045.5	1047.0
10°	1023.0	1026.0	1033.5	1038.0	1039.5
12.5°	1009.5	1012.5	1021.5	1027.5	1029.0
15°	991.5	997.5	1006.5	1015.5	1017.0
17.5°	979.5	978.0	990.0	1000.5	1003.5
20°	951.0	958.5	972.0	984.0	987.0
22.5°	927.0	933.0	951.0	964.5	970.5
25°	903.0	909.0	931.5	945.0	951.0
27.5°	873.0	882.0	903.0	922.5	930.0
30°	843.0	852.0	876.0	898.5	907.5
32.5°	813.0	823.5	849.0	873.0	883.5
35°	780.0	790.5	819.0	847.5	859.5
37.5°	745.5	759.0	789.0	820.5	834.0
40°	711.0	724.5	756.0	792.0	807.0
42.5°	682.5	688.5	724.5	763.5	778.5
45°	649.5	654.0	691.5	733.5	751.5
47.5°	601.5	618.0	658.5	705.0	723.0
50°	564.0	582.0	624.0	673.5	693.0
52.5°	532.5	544.5	591.0	640.5	663.0
55°	498.0	507.0	555.0	607.5	631.5
57.5°	456.0	472.5	520.5	574.5	598.5
60°	409.5	430.5	483.0	541.5	565.5
62.5°	379.5	391.5	448.5	507.0	534.0
65°	336.0	351.0	411.0	471.0	499.5
67.5°	300.0	315.0	376.5	436.5	465.0
70°	261.0	276.0	340.5	400.5	429.0
72.5°	216.0	237.0	304.5	364.5	394.5
75°	180.0	199.5	265.5	325.5	349.5
77.5°	139.5	165.0	226.5	276.0	294.0
80°	103.5	129.0	184.5	220.5	237.0
82.5°	70.5	96.0	138.0	165.0	174.0
85°	42.0	60.0	88.5	103.5	102.0
87.5°	19.5	25.5	36.0	36.0	34.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)