

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: P312855

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-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: P312855
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-L83050-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: 3137.0 lumens
Efficiency: N/A
Efficacy: 97.1 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

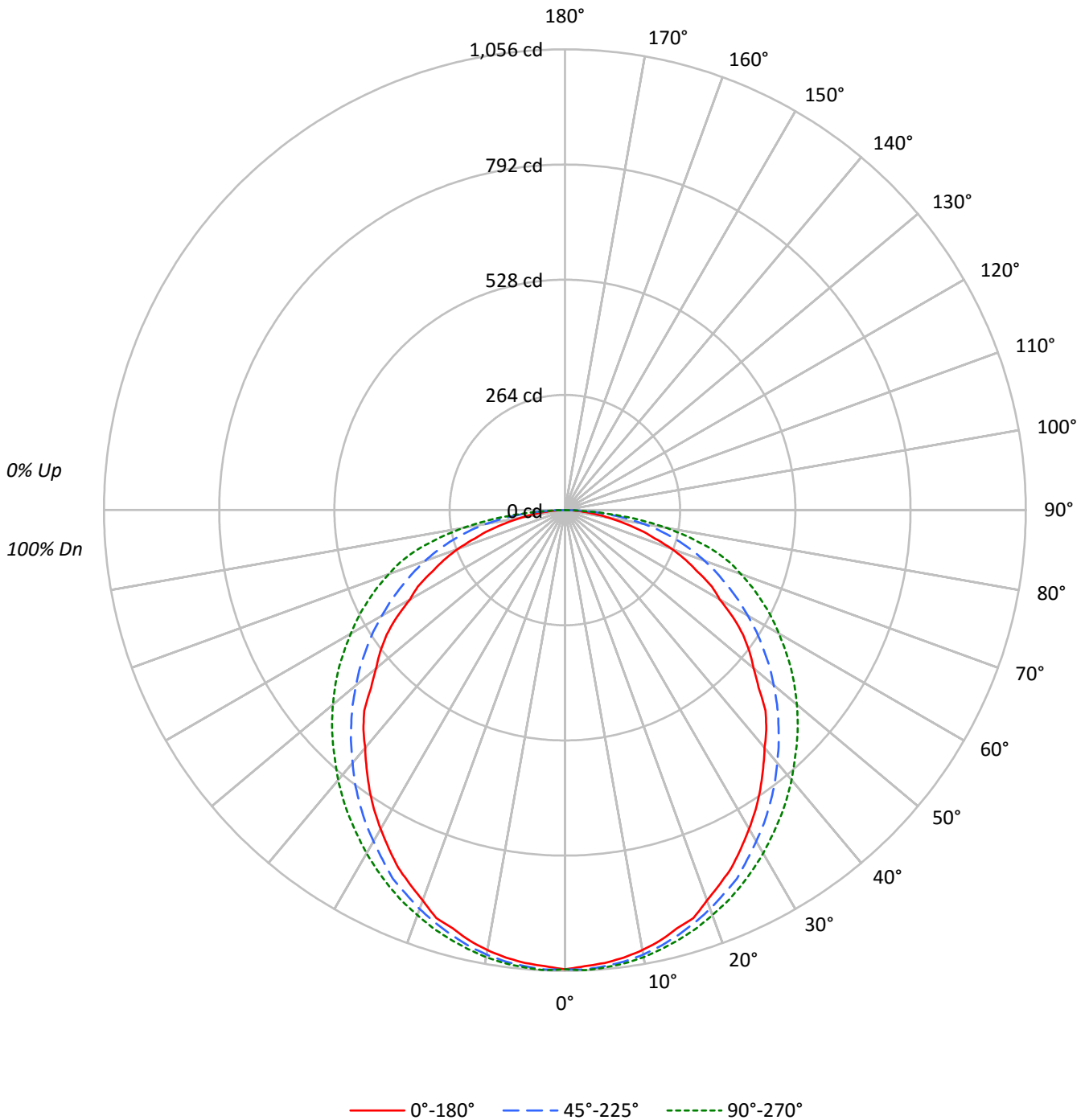
Input Watts (W): 32.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2832	2832	2832
5°	2815	2835	2843
10°	2798	2827	2843
15°	2765	2807	2836
20°	2726	2786	2829
25°	2684	2768	2826
30°	2622	2724	2823
35°	2565	2693	2826
40°	2500	2658	2838
45°	2474	2634	2863
50°	2363	2615	2904
55°	2339	2606	2966
60°	2206	2602	3046
65°	2141	2620	3184
70°	2055	2681	3378
75°	1874	2764	3637
80°	1605	2862	3676
85°	1297	2736	3152



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.6	3.2
10°-20°	284.1	9.1
20°-30°	427.6	13.6
30°-40°	513.2	16.4
40°-50°	536.4	17.1
50°-60°	499.9	15.9
60°-70°	410.0	13.1
70°-80°	276.3	8.8
80°-90°	90.0	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°	811.3	25.9
0°-40°	1324.5	42.2
0°-60°	2360.8	75.3
0°-90°	3137.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3137.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1052	1052	1052	1052	1052	
5°	1042	1045	1050	1051	1052	99
15°	992	998	1007	1016	1018	280
25°	904	910	932	946	952	416
35°	781	791	820	848	860	488
45°	650	655	692	734	752	497
55°	498	508	556	608	632	442
65°	336	351	411	471	500	335
75°	180	200	266	326	350	189
85°	42	60	89	104	102	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1052.5	1052.5	1052.5	1052.5	1052.5
2.5°	1046.5	1049.5	1054.0	1055.5	1055.5
5°	1042.0	1045.0	1049.5	1051.0	1052.5
7.5°	1034.5	1037.5	1043.5	1046.5	1048.0
10°	1024.0	1027.0	1034.5	1039.0	1040.5
12.5°	1010.5	1013.5	1022.5	1028.5	1030.0
15°	992.4	998.4	1007.4	1016.5	1018.0
17.5°	980.4	978.9	990.9	1001.4	1004.4
20°	951.9	959.4	972.9	984.9	987.9
22.5°	927.9	933.9	951.9	965.4	971.4
25°	903.9	909.9	932.4	945.9	951.9
27.5°	873.8	882.8	903.9	923.4	930.9
30°	843.8	852.8	876.8	899.3	908.4
32.5°	813.8	824.3	849.8	873.8	884.3
35°	780.7	791.2	819.8	848.3	860.3
37.5°	746.2	759.7	789.7	821.3	834.8
40°	711.7	725.2	756.7	792.7	807.8
42.5°	683.1	689.1	725.2	764.2	779.2
45°	650.1	654.6	692.2	734.2	752.2
47.5°	602.1	618.6	659.1	705.7	723.7
50°	564.5	582.5	624.6	674.1	693.7
52.5°	533.0	545.0	591.6	641.1	663.6
55°	498.5	507.5	555.5	608.1	632.1
57.5°	456.4	472.9	521.0	575.0	599.1
60°	409.9	430.9	483.5	542.0	566.0
62.5°	379.9	391.9	448.9	507.5	534.5
65°	336.3	351.3	411.4	471.4	500.0
67.5°	300.3	315.3	376.9	436.9	465.4
70°	261.2	276.3	340.8	400.9	429.4
72.5°	216.2	237.2	304.8	364.8	394.9
75°	180.2	199.7	265.8	325.8	349.8
77.5°	139.6	165.2	226.7	276.3	294.3
80°	103.6	129.1	184.7	220.7	237.2
82.5°	70.6	96.1	138.1	165.2	174.2
85°	42.0	60.1	88.6	103.6	102.1
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)