

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: P312883

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-CP187-W2A-U-4500K**

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: P312883
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: 22FCZ2-44HE-UNV-L83050-CP187-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 4500K 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: 3947.0 lumens
Efficiency: N/A
Efficacy: 101.2 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

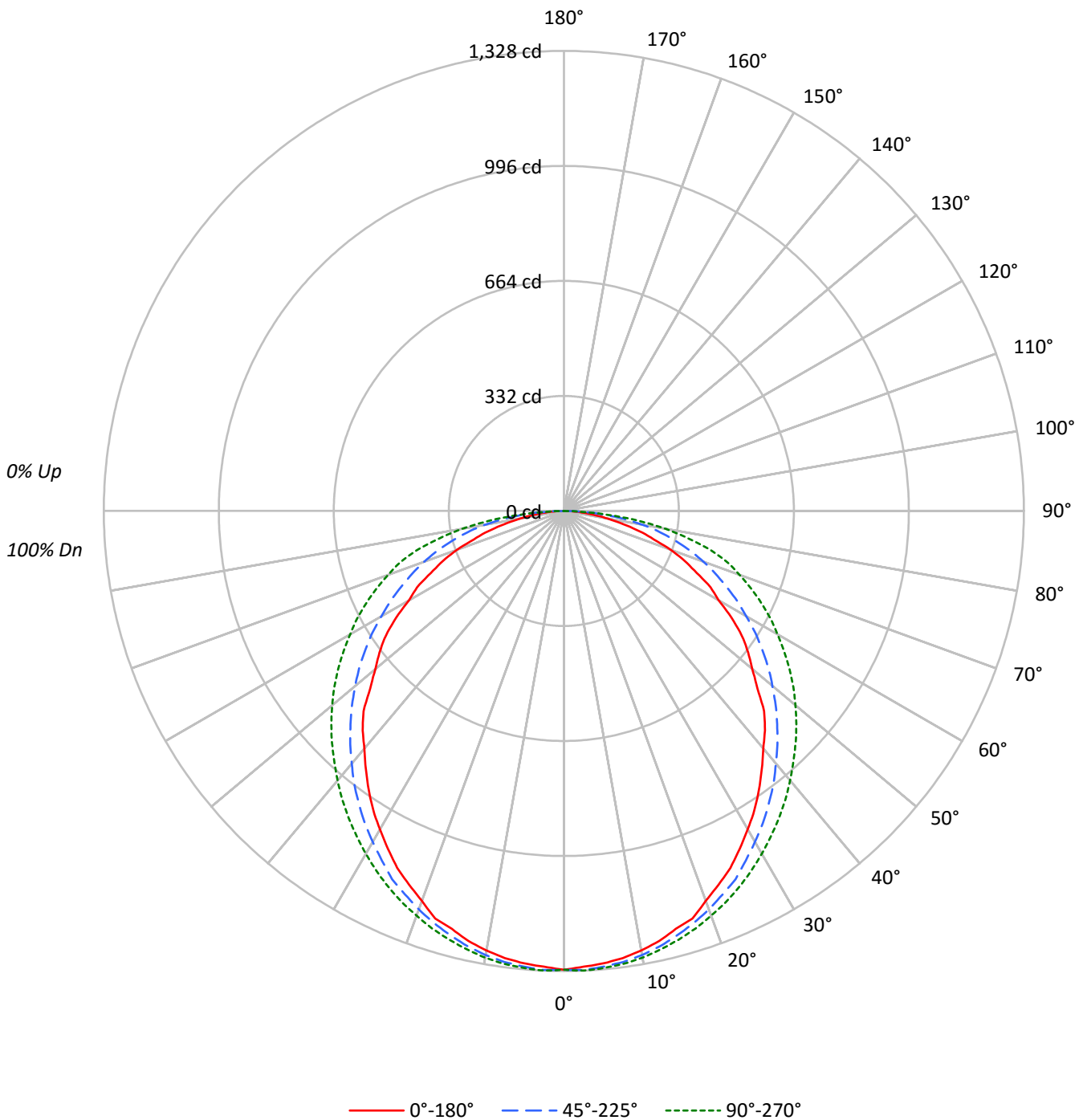
Input Watts (W): 39
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3564	3564	3564
5°	3541	3567	3577
10°	3521	3557	3577
15°	3479	3531	3568
20°	3430	3505	3560
25°	3377	3483	3556
30°	3299	3428	3551
35°	3227	3388	3556
40°	3145	3345	3570
45°	3113	3314	3602
50°	2974	3290	3654
55°	2943	3279	3731
60°	2775	3274	3833
65°	2695	3296	4006
70°	2586	3374	4251
75°	2357	3477	4577
80°	2019	3601	4626
85°	1633	3443	3968



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.3	3.2
10°-20°	357.5	9.1
20°-30°	538.0	13.6
30°-40°	645.7	16.4
40°-50°	674.9	17.1
50°-60°	629.0	15.9
60°-70°	515.9	13.1
70°-80°	347.6	8.8
80°-90°	113.2	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°	1020.8	25.9
0°-40°	1666.5	42.2
0°-60°	2970.3	75.3
0°-90°	3947.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3947.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1324	1324	1324	1324	1324	
5°	1311	1315	1320	1322	1324	124
15°	1249	1256	1268	1279	1281	353
25°	1137	1145	1173	1190	1198	523
35°	982	996	1031	1067	1082	614
45°	818	824	871	924	946	625
55°	627	638	699	765	795	556
65°	423	442	518	593	629	421
75°	227	251	334	410	440	238
85°	53	76	112	130	128	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1324.3	1324.3	1324.3	1324.3	1324.3
2.5°	1316.7	1320.5	1326.1	1328.0	1328.0
5°	1311.0	1314.8	1320.5	1322.4	1324.3
7.5°	1301.6	1305.4	1312.9	1316.7	1318.6
10°	1288.4	1292.1	1301.6	1307.3	1309.1
12.5°	1271.4	1275.1	1286.5	1294.0	1295.9
15°	1248.7	1256.2	1267.6	1278.9	1280.8
17.5°	1233.6	1231.7	1246.8	1260.0	1263.8
20°	1197.7	1207.1	1224.1	1239.2	1243.0
22.5°	1167.5	1175.0	1197.7	1214.7	1222.2
25°	1137.2	1144.8	1173.1	1190.1	1197.7
27.5°	1099.5	1110.8	1137.2	1161.8	1171.2
30°	1061.7	1073.0	1103.2	1131.6	1142.9
32.5°	1023.9	1037.1	1069.2	1099.5	1112.7
35°	982.3	995.6	1031.4	1067.3	1082.4
37.5°	938.9	955.9	993.7	1033.3	1050.3
40°	895.4	912.4	952.1	997.4	1016.3
42.5°	859.5	867.1	912.4	961.5	980.4
45°	818.0	823.6	870.9	923.8	946.4
47.5°	757.5	778.3	829.3	887.9	910.5
50°	710.3	733.0	785.9	848.2	872.8
52.5°	670.6	685.7	744.3	806.6	835.0
55°	627.2	638.5	699.0	765.1	795.3
57.5°	574.3	595.1	655.5	723.5	753.7
60°	515.7	542.2	608.3	682.0	712.2
62.5°	477.9	493.1	564.8	638.5	672.5
65°	423.2	442.0	517.6	593.2	629.1
67.5°	377.8	396.7	474.2	549.7	585.6
70°	328.7	347.6	428.8	504.4	540.3
72.5°	272.0	298.5	383.5	459.0	496.8
75°	226.7	251.2	334.4	409.9	440.2
77.5°	175.7	207.8	285.3	347.6	370.3
80°	130.3	162.5	232.4	277.7	298.5
82.5°	88.8	120.9	173.8	207.8	219.1
85°	52.9	75.6	111.5	130.3	128.5
87.5°	24.6	32.1	45.3	45.3	43.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)