

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: P310384

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-CP187-W2A-U-3500K**

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: P310384
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-65HE-UNV-L82765-RDP-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 3500K 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: 3673.0 lumens
Efficiency: N/A
Efficacy: 69.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

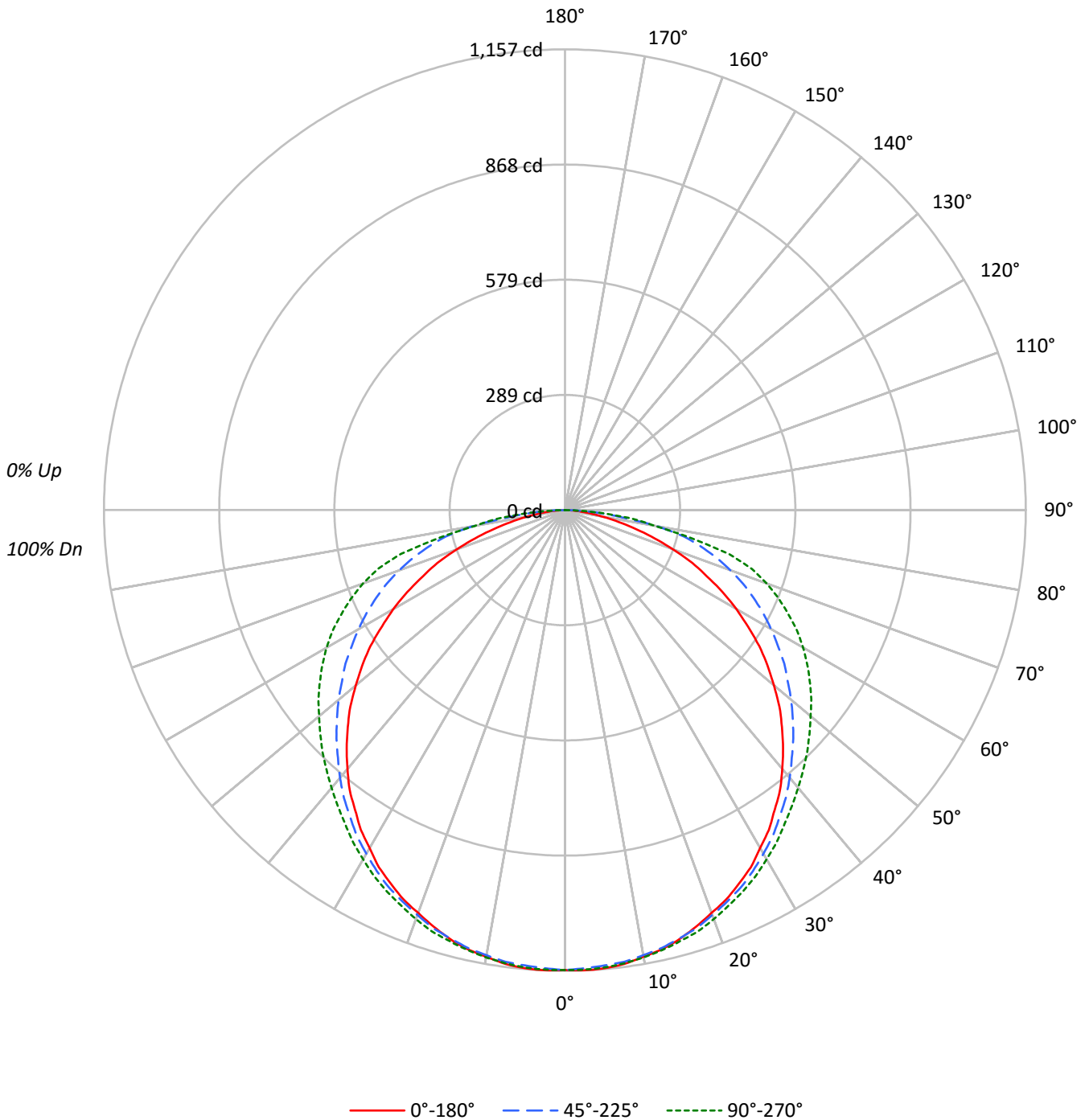
Input Watts (W): 52.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	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°	1554	1554	1554
5°	1560	1550	1558
10°	1556	1551	1558
15°	1553	1551	1561
20°	1542	1550	1565
25°	1536	1552	1569
30°	1523	1548	1574
35°	1508	1544	1580
40°	1491	1542	1600
45°	1466	1543	1636
50°	1434	1552	1686
55°	1397	1577	1761
60°	1338	1608	1858
65°	1253	1665	1972
70°	1140	1742	2122
75°	966	1837	2216
80°	762	1850	1793
85°	562	1406	1575



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.6	3.0
10°-20°	315.3	8.6
20°-30°	482.2	13.1
30°-40°	589.5	16.0
40°-50°	628.3	17.1
50°-60°	600.7	16.4
60°-70°	508.9	13.9
70°-80°	342.0	9.3
80°-90°	96.5	2.6
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°	907.1	24.7
0°-40°	1496.6	40.7
0°-60°	2725.6	74.2
0°-90°	3673.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3673.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1155	1155	1155	1155	1155	
5°	1155	1153	1148	1153	1153	110
15°	1115	1115	1113	1122	1120	314
25°	1035	1038	1046	1055	1057	477
35°	918	926	940	958	962	575
45°	771	783	811	845	860	594
55°	596	618	672	725	751	531
65°	394	434	523	592	619	391
75°	186	253	353	414	426	199
85°	36	75	91	98	102	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1155.1	1155.1	1155.1	1155.1	1155.1
2.5°	1156.9	1156.9	1151.4	1155.1	1155.1
5°	1155.1	1153.2	1147.8	1153.2	1153.2
7.5°	1149.6	1147.8	1144.1	1149.6	1147.8
10°	1138.7	1138.7	1135.0	1140.5	1140.5
12.5°	1129.5	1127.7	1125.9	1133.2	1131.4
15°	1115.0	1115.0	1113.2	1122.3	1120.4
17.5°	1096.8	1098.6	1100.4	1107.7	1109.5
20°	1076.7	1080.4	1082.2	1093.1	1093.1
22.5°	1058.5	1060.3	1064.0	1074.9	1074.9
25°	1034.8	1038.5	1045.7	1054.9	1056.7
27.5°	1011.1	1012.9	1022.1	1034.8	1036.6
30°	980.2	985.6	996.6	1011.1	1012.9
32.5°	952.8	958.3	971.0	985.6	989.3
35°	918.2	925.5	940.1	958.3	961.9
37.5°	887.2	892.7	910.9	931.0	936.4
40°	849.0	859.9	878.1	901.8	910.9
42.5°	810.7	821.7	843.5	874.5	885.4
45°	770.6	783.4	810.7	845.3	859.9
47.5°	730.6	745.1	776.1	816.2	832.6
50°	685.0	703.2	741.5	787.0	805.3
52.5°	641.3	663.2	705.1	756.1	779.8
55°	595.7	617.6	672.3	725.1	750.6
57.5°	544.7	573.9	634.0	694.1	721.5
60°	497.4	524.7	597.6	663.2	690.5
62.5°	446.4	482.8	561.1	630.4	657.7
65°	393.5	433.6	522.9	592.1	619.4
67.5°	346.2	389.9	484.6	553.8	581.2
70°	289.7	344.3	442.7	511.9	539.3
72.5°	236.8	297.0	399.0	466.4	491.9
75°	185.8	253.2	353.4	413.6	426.3
77.5°	138.5	209.5	306.1	331.6	322.5
80°	98.4	167.6	238.7	225.9	231.4
82.5°	63.8	127.5	147.6	167.6	173.1
85°	36.4	74.7	91.1	98.4	102.0
87.5°	16.4	27.3	36.4	36.4	34.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)