

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: P313730

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-RDP-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: P313730
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-L83050-RDP-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 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: 3554.0 lumens
Efficiency: N/A
Efficacy: 67.7 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

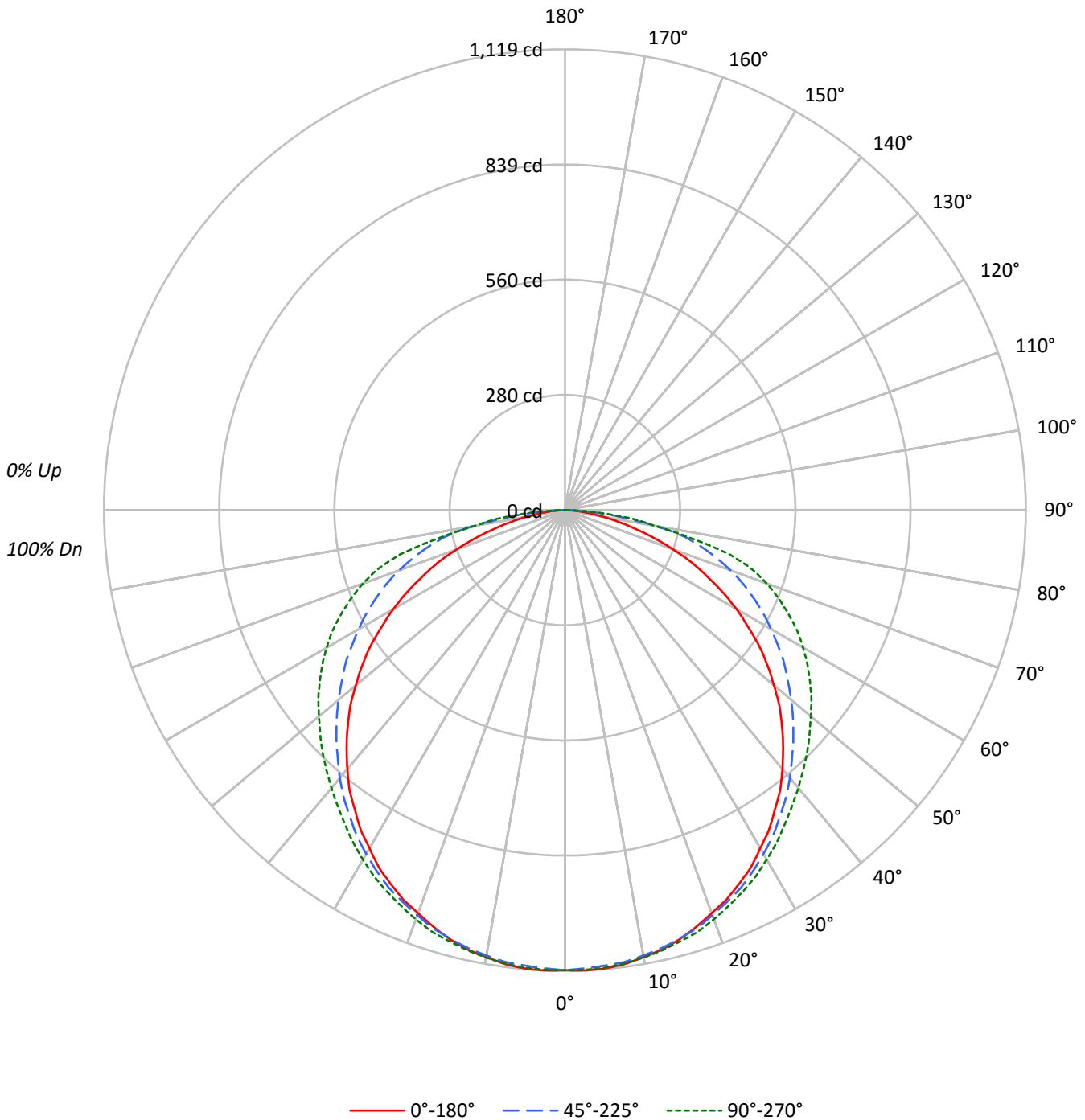
Input Watts (W): 52.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1504	1504	1504
5°	1509	1500	1507
10°	1505	1500	1508
15°	1503	1500	1510
20°	1492	1499	1514
25°	1487	1502	1518
30°	1473	1498	1523
35°	1459	1494	1529
40°	1443	1492	1548
45°	1419	1493	1583
50°	1387	1502	1631
55°	1352	1526	1704
60°	1295	1556	1798
65°	1212	1611	1908
70°	1103	1685	2053
75°	935	1778	2144
80°	738	1789	1735
85°	545	1360	1524



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.0	3.0
10°-20°	305.1	8.6
20°-30°	466.6	13.1
30°-40°	570.4	16.0
40°-50°	607.9	17.1
50°-60°	581.3	16.4
60°-70°	492.4	13.9
70°-80°	330.9	9.3
80°-90°	93.4	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°	877.7	24.7
0°-40°	1448.1	40.7
0°-60°	2637.3	74.2
0°-90°	3554.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3554.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1118	1118	1118	1118	1118	
5°	1118	1116	1111	1116	1116	106
15°	1079	1079	1077	1086	1084	304
25°	1001	1005	1012	1021	1022	461
35°	888	896	910	927	931	557
45°	746	758	784	818	832	575
55°	576	598	650	702	726	513
65°	381	420	506	573	599	378
75°	180	245	342	400	412	193
85°	35	72	88	95	99	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1117.6	1117.6	1117.6	1117.6	1117.6
2.5°	1119.4	1119.4	1114.1	1117.6	1117.6
5°	1117.6	1115.9	1110.6	1115.9	1115.9
7.5°	1112.3	1110.6	1107.1	1112.3	1110.6
10°	1101.8	1101.8	1098.2	1103.5	1103.5
12.5°	1093.0	1091.2	1089.4	1096.5	1094.7
15°	1078.8	1078.8	1077.1	1085.9	1084.1
17.5°	1061.2	1063.0	1064.7	1071.8	1073.6
20°	1041.8	1045.4	1047.1	1057.7	1057.7
22.5°	1024.2	1026.0	1029.5	1040.1	1040.1
25°	1001.3	1004.8	1011.9	1020.7	1022.4
27.5°	978.4	980.1	988.9	1001.3	1003.0
30°	948.4	953.7	964.3	978.4	980.1
32.5°	922.0	927.2	939.6	953.7	957.2
35°	888.5	895.5	909.6	927.2	930.8
37.5°	858.5	863.8	881.4	900.8	906.1
40°	821.5	832.1	849.7	872.6	881.4
42.5°	784.5	795.0	816.2	846.2	856.7
45°	745.7	758.0	784.5	818.0	832.1
47.5°	706.9	721.0	751.0	789.7	805.6
50°	662.8	680.5	717.5	761.5	779.2
52.5°	620.5	641.7	682.2	731.6	754.5
55°	576.4	597.6	650.5	701.6	726.3
57.5°	527.1	555.3	613.5	671.6	698.1
60°	481.3	507.7	578.2	641.7	668.1
62.5°	431.9	467.1	543.0	609.9	636.4
65°	380.8	419.6	505.9	572.9	599.4
67.5°	334.9	377.2	468.9	535.9	562.3
70°	280.3	333.2	428.4	495.4	521.8
72.5°	229.2	287.3	386.1	451.3	476.0
75°	179.8	245.0	342.0	400.2	412.5
77.5°	134.0	202.7	296.2	320.8	312.0
80°	95.2	162.2	230.9	218.6	223.9
82.5°	61.7	123.4	142.8	162.2	167.5
85°	35.3	72.3	88.1	95.2	98.7
87.5°	15.9	26.4	35.3	35.3	33.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)