

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: P310383

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-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: P310383
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-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: 3551.0 lumens
Efficiency: N/A
Efficacy: 68.0 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

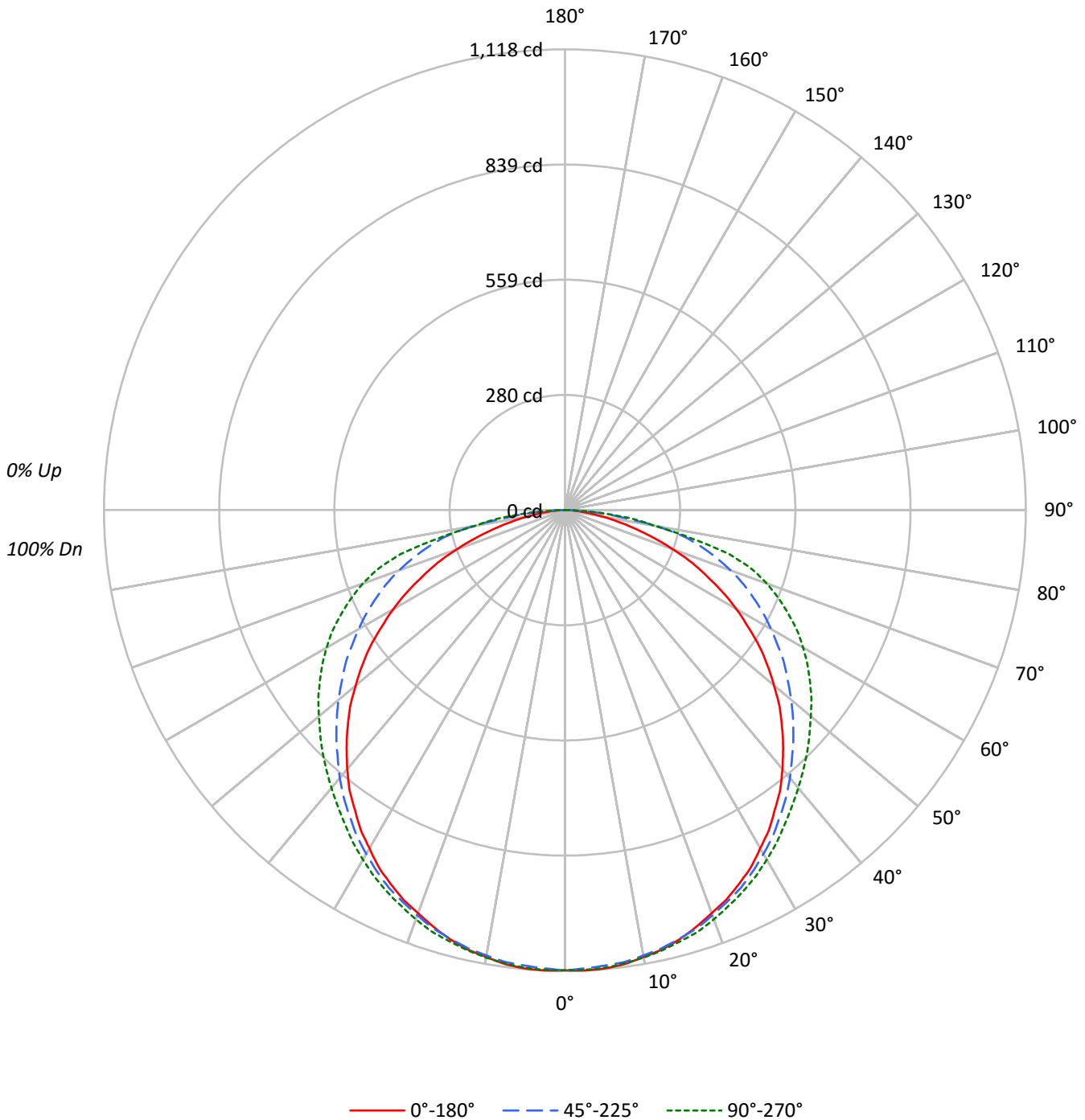
Input Watts (W): 52.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1503	1503	1503
5°	1508	1499	1506
10°	1504	1499	1506
15°	1501	1499	1509
20°	1491	1498	1513
25°	1485	1501	1517
30°	1472	1497	1521
35°	1458	1493	1528
40°	1442	1491	1547
45°	1418	1491	1582
50°	1386	1501	1630
55°	1351	1525	1702
60°	1294	1555	1796
65°	1211	1609	1907
70°	1102	1684	2051
75°	934	1776	2143
80°	737	1788	1733
85°	543	1360	1522



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.9	3.0
10°-20°	304.9	8.6
20°-30°	466.2	13.1
30°-40°	569.9	16.0
40°-50°	607.4	17.1
50°-60°	580.8	16.4
60°-70°	492.0	13.9
70°-80°	330.7	9.3
80°-90°	93.3	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°	877.0	24.7
0°-40°	1446.9	40.7
0°-60°	2635.1	74.2
0°-90°	3551.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3551.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1117	1117	1117	1117	1117	
5°	1117	1115	1110	1115	1115	106
15°	1078	1078	1076	1085	1083	304
25°	1000	1004	1011	1020	1022	461
35°	888	895	909	926	930	556
45°	745	757	784	817	831	575
55°	576	597	650	701	726	513
65°	380	419	506	572	599	378
75°	180	245	342	400	412	192
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°	1116.7	1116.7	1116.7	1116.7	1116.7
2.5°	1118.4	1118.4	1113.2	1116.7	1116.7
5°	1116.7	1114.9	1109.6	1114.9	1114.9
7.5°	1111.4	1109.6	1106.1	1111.4	1109.6
10°	1100.8	1100.8	1097.3	1102.6	1102.6
12.5°	1092.0	1090.3	1088.5	1095.6	1093.8
15°	1077.9	1077.9	1076.2	1085.0	1083.2
17.5°	1060.3	1062.1	1063.8	1070.9	1072.7
20°	1041.0	1044.5	1046.2	1056.8	1056.8
22.5°	1023.3	1025.1	1028.6	1039.2	1039.2
25°	1000.4	1004.0	1011.0	1019.8	1021.6
27.5°	977.5	979.3	988.1	1000.4	1002.2
30°	947.6	952.9	963.5	977.5	979.3
32.5°	921.2	926.5	938.8	952.9	956.4
35°	887.7	894.8	908.9	926.5	930.0
37.5°	857.8	863.1	880.7	900.0	905.3
40°	820.8	831.4	849.0	871.9	880.7
42.5°	783.8	794.4	815.5	845.4	856.0
45°	745.0	757.4	783.8	817.3	831.4
47.5°	706.3	720.4	750.3	789.1	804.9
50°	662.3	679.9	716.9	760.9	778.5
52.5°	620.0	641.1	681.6	731.0	753.9
55°	576.0	597.1	649.9	701.0	725.7
57.5°	526.6	554.8	612.9	671.1	697.5
60°	480.8	507.3	577.7	641.1	667.5
62.5°	431.5	466.8	542.5	609.4	635.8
65°	380.4	419.2	505.5	572.4	598.9
67.5°	334.7	376.9	468.5	535.4	561.9
70°	280.1	332.9	428.0	494.9	521.4
72.5°	229.0	287.1	385.7	450.9	475.6
75°	179.7	244.8	341.7	399.8	412.2
77.5°	133.9	202.6	295.9	320.6	311.8
80°	95.1	162.0	230.7	218.4	223.7
82.5°	61.6	123.3	142.7	162.0	167.3
85°	35.2	72.2	88.1	95.1	98.6
87.5°	15.9	26.4	35.2	35.2	33.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)