

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: P314056

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-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: P314056
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-55HE-UNV-L83050-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 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: 4748.0 lumens
Efficiency: N/A
Efficacy: 110.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

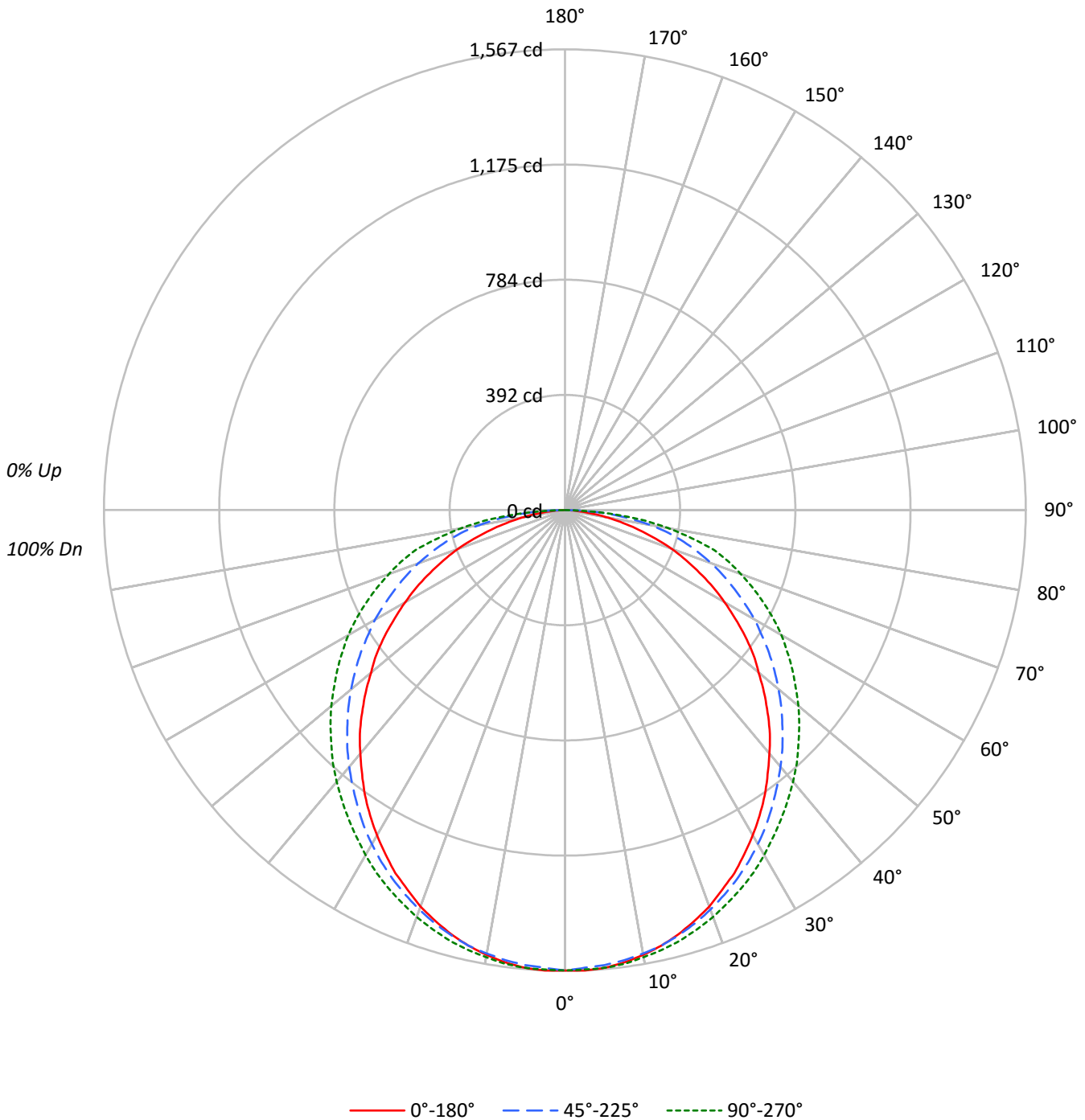
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2107	2107	2107
5°	2111	2098	2111
10°	2098	2092	2109
15°	2080	2085	2111
20°	2055	2071	2109
25°	2023	2056	2107
30°	1985	2039	2105
35°	1946	2018	2106
40°	1901	2003	2119
45°	1855	1990	2137
50°	1800	1985	2170
55°	1755	1988	2213
60°	1687	2005	2289
65°	1610	2026	2372
70°	1524	2089	2504
75°	1359	2178	2735
80°	1160	2307	2795
85°	827	2286	2675



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.2	3.1
10°-20°	423.7	8.9
20°-30°	640.0	13.5
30°-40°	771.3	16.2
40°-50°	809.8	17.1
50°-60°	757.6	16.0
60°-70°	625.6	13.2
70°-80°	426.3	9.0
80°-90°	145.4	3.1
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°	1211.9	25.5
0°-40°	1983.3	41.8
0°-60°	3550.6	74.8
0°-90°	4748.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4748.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1566	1566	1566	1566	1566	
5°	1563	1561	1553	1563	1563	148
15°	1493	1495	1496	1512	1515	421
25°	1363	1369	1385	1412	1419	627
35°	1185	1197	1229	1270	1282	740
45°	975	996	1046	1103	1123	752
55°	748	778	848	917	944	668
65°	506	548	636	717	745	502
75°	262	321	419	498	526	279
85°	54	106	148	167	173	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1565.8	1565.8	1565.8	1565.8	1565.8
2.5°	1567.4	1565.8	1558.0	1565.8	1564.3
5°	1562.7	1561.1	1553.2	1562.7	1562.7
7.5°	1551.7	1551.7	1543.8	1554.8	1556.4
10°	1535.9	1535.9	1531.2	1543.8	1543.8
12.5°	1517.0	1517.0	1517.0	1529.6	1531.2
15°	1493.4	1495.0	1496.5	1512.3	1515.4
17.5°	1465.0	1468.2	1472.9	1491.8	1495.0
20°	1435.1	1438.2	1446.1	1468.2	1472.9
22.5°	1397.3	1405.2	1416.2	1441.4	1446.1
25°	1362.6	1368.9	1384.7	1411.5	1419.3
27.5°	1320.1	1329.6	1350.0	1378.4	1389.4
30°	1277.6	1287.0	1312.2	1345.3	1354.8
32.5°	1231.9	1246.1	1272.8	1307.5	1318.5
35°	1184.6	1197.2	1228.7	1269.7	1282.3
37.5°	1132.6	1150.0	1184.6	1228.7	1244.5
40°	1082.2	1101.1	1140.5	1187.8	1206.7
42.5°	1031.8	1050.7	1094.8	1148.4	1167.3
45°	975.1	995.6	1046.0	1102.7	1123.2
47.5°	918.4	943.6	998.7	1058.6	1080.7
50°	860.1	888.5	948.3	1011.3	1036.5
52.5°	808.1	834.9	897.9	965.7	989.3
55°	748.3	778.2	847.5	916.8	943.6
57.5°	686.8	719.9	794.0	869.6	896.3
60°	627.0	663.2	745.1	820.7	850.7
62.5°	568.7	604.9	690.0	768.7	798.7
65°	505.7	548.2	636.4	716.8	745.1
67.5°	445.8	491.5	584.4	663.2	691.6
70°	387.5	431.6	530.9	608.1	636.4
72.5°	324.5	374.9	474.2	554.5	584.4
75°	261.5	321.4	419.0	497.8	526.2
77.5°	203.2	264.7	362.3	426.9	441.1
80°	149.7	212.7	297.7	343.4	360.7
82.5°	96.1	159.1	226.8	259.9	274.1
85°	53.6	105.5	148.1	167.0	173.3
87.5°	22.1	45.7	59.9	67.7	67.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)