

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: P314287

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-S-CP250-W2A-U-4000K**

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: P314287  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-40HE-UNV-L83050-S-CP250-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET  
Light Source: (336) 4000K 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**

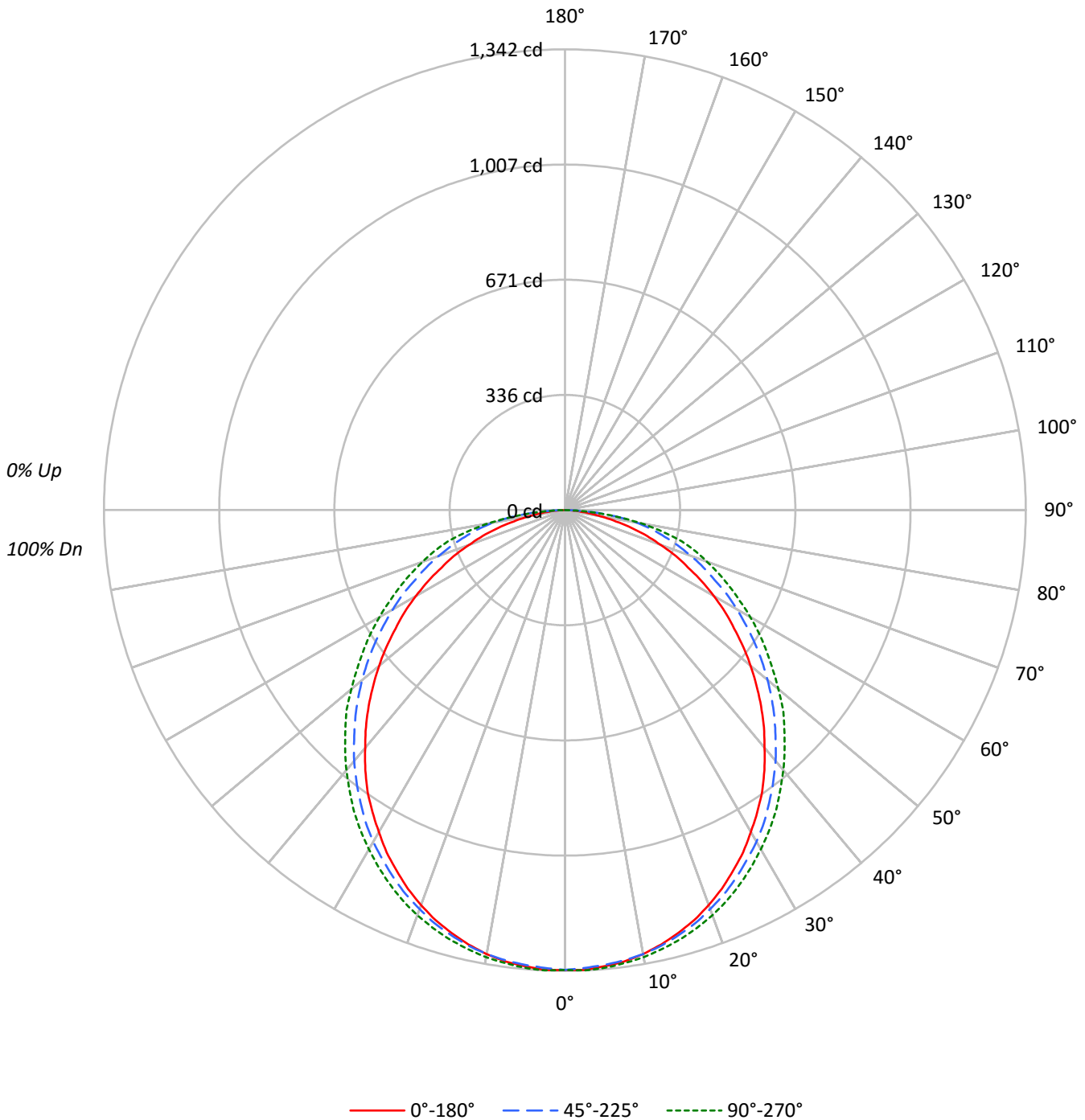
Lumens per Lamp: N/A  
Luminaire Lumens: 3813.0 lumens  
Efficiency: N/A  
Efficacy: 122.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1802	1802	1802
5°	1801	1796	1808
10°	1794	1794	1807
15°	1776	1785	1803
20°	1753	1771	1798
25°	1721	1753	1787
30°	1682	1733	1773
35°	1645	1705	1759
40°	1589	1676	1738
45°	1537	1643	1719
50°	1478	1612	1699
55°	1412	1582	1682
60°	1346	1558	1678
65°	1261	1531	1689
70°	1167	1539	1734
75°	1045	1568	1832
80°	845	1661	1792
85°	636	1459	1420



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	126.8	3.3
10°-20°	362.4	9.5
20°-30°	544.7	14.3
30°-40°	648.8	17.0
40°-50°	664.0	17.4
50°-60°	597.8	15.7
60°-70°	469.5	12.3
70°-80°	304.7	8.0
80°-90°	94.2	2.5
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°	1033.9	27.1
0°-40°	1682.7	44.1
0°-60°	2944.6	77.2
0°-90°	3813.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3813.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1340	1340	1340	1340	1340	
5°	1334	1336	1330	1337	1338	127
15°	1275	1279	1281	1292	1295	360
25°	1159	1169	1181	1200	1204	534
35°	1002	1014	1038	1063	1071	625
45°	808	827	864	896	904	623
55°	602	629	675	710	717	540
65°	396	426	481	521	530	394
75°	201	240	302	343	352	213
85°	41	76	94	92	92	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1339.5	1339.5	1339.5	1339.5	1339.5
2.5°	1340.7	1340.7	1334.7	1340.7	1342.0
5°	1333.5	1335.9	1329.8	1337.1	1338.3
7.5°	1326.2	1326.2	1322.6	1329.8	1331.1
10°	1312.9	1314.1	1312.9	1321.4	1322.6
12.5°	1295.9	1298.4	1299.6	1308.0	1309.3
15°	1275.3	1279.0	1281.4	1292.3	1294.7
17.5°	1252.3	1256.0	1262.0	1274.1	1276.6
20°	1224.5	1229.3	1236.6	1252.3	1256.0
22.5°	1194.2	1199.0	1211.1	1225.7	1231.7
25°	1159.1	1168.8	1180.9	1200.2	1203.9
27.5°	1123.9	1132.4	1148.2	1168.8	1173.6
30°	1082.8	1096.1	1115.5	1136.1	1140.9
32.5°	1042.8	1056.1	1079.1	1100.9	1107.0
35°	1001.6	1013.7	1038.0	1063.4	1070.7
37.5°	954.4	970.1	996.8	1022.2	1029.5
40°	904.7	924.1	954.4	981.0	989.5
42.5°	857.5	878.1	908.4	937.4	947.1
45°	807.8	827.2	863.5	896.3	903.5
47.5°	757.0	778.8	817.5	850.2	862.3
50°	706.1	729.1	770.3	804.2	811.5
52.5°	655.2	679.5	723.1	759.4	763.0
55°	601.9	628.6	674.6	709.7	717.0
57.5°	553.5	576.5	626.2	662.5	671.0
60°	500.2	525.6	578.9	612.8	623.7
62.5°	449.3	476.0	531.7	565.6	575.3
65°	396.0	426.3	480.8	520.8	530.5
67.5°	350.0	379.1	437.2	476.0	485.7
70°	296.7	329.4	391.2	431.2	440.9
72.5°	250.7	284.6	346.4	385.1	399.7
75°	201.1	239.8	301.6	342.8	352.4
77.5°	152.6	197.4	260.4	291.9	291.9
80°	109.0	156.2	214.4	228.9	231.3
82.5°	71.5	117.5	158.7	157.4	157.4
85°	41.2	76.3	94.5	92.0	92.0
87.5°	15.7	31.5	33.9	33.9	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)