

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: P313326

Luminaire Tested: **24FCZ2-60HE-UNV-L83050-HRP-CP125-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: P313326  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-60HE-UNV-L83050-HRP-CP125-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" 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: 4186.0 lumens  
Efficiency: N/A  
Efficacy: 87.9 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

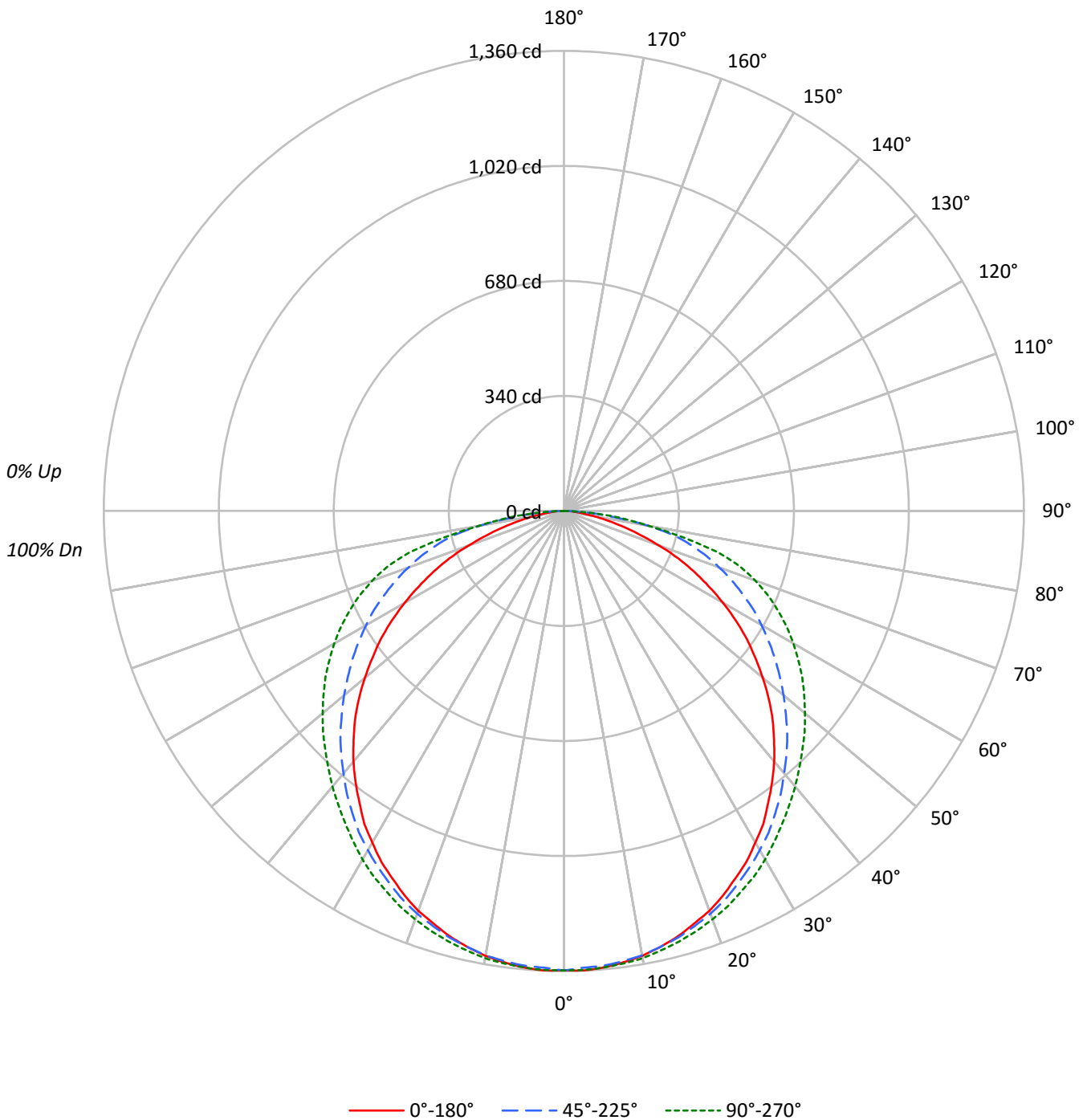
Input Watts (W): 47.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

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

	0°	45°	90°
0°	1827	1827	1827
5°	1830	1823	1830
10°	1824	1822	1834
15°	1814	1819	1836
20°	1802	1814	1839
25°	1780	1806	1842
30°	1759	1800	1849
35°	1730	1790	1851
40°	1699	1779	1868
45°	1661	1777	1897
50°	1607	1775	1948
55°	1550	1788	2019
60°	1462	1816	2108
65°	1350	1858	2226
70°	1179	1923	2371
75°	957	2022	2451
80°	706	1983	1983
85°	540	1460	1650



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.7	3.1
10°-20°	369.5	8.8
20°-30°	562.5	13.4
30°-40°	683.0	16.3
40°-50°	721.5	17.2
50°-60°	680.9	16.3
60°-70°	566.1	13.5
70°-80°	372.4	8.9
80°-90°	101.5	2.4
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°	1060.6	25.3
0°-40°	1743.5	41.7
0°-60°	3145.9	75.2
0°-90°	4186.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4186.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1358	1358	1358	1358	1358	
5°	1355	1355	1349	1355	1355	129
15°	1302	1304	1306	1318	1318	367
25°	1199	1206	1216	1237	1241	553
35°	1053	1066	1090	1118	1127	659
45°	873	890	934	980	997	672
55°	661	689	762	834	860	588
65°	424	473	584	669	699	419
75°	184	268	389	461	471	198
85°	35	77	95	105	107	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1358.2	1358.2	1358.2	1358.2	1358.2
2.5°	1359.9	1358.2	1351.1	1358.2	1358.2
5°	1354.6	1354.6	1349.4	1354.6	1354.6
7.5°	1345.9	1345.9	1342.4	1349.4	1349.4
10°	1335.4	1335.4	1333.6	1342.4	1342.4
12.5°	1319.6	1321.3	1319.6	1330.1	1330.1
15°	1302.1	1303.8	1305.6	1317.8	1317.8
17.5°	1279.3	1282.8	1286.3	1300.3	1302.1
20°	1258.3	1260.0	1267.0	1282.8	1284.5
22.5°	1230.2	1235.5	1244.2	1260.0	1265.3
25°	1198.7	1205.7	1216.2	1237.2	1240.7
27.5°	1168.9	1174.1	1188.2	1210.9	1218.0
30°	1132.1	1140.8	1158.4	1181.2	1189.9
32.5°	1097.0	1105.8	1126.8	1151.4	1158.4
35°	1053.2	1065.5	1090.0	1118.1	1126.8
37.5°	1011.2	1023.4	1053.2	1084.8	1095.3
40°	967.4	981.4	1012.9	1049.7	1063.7
42.5°	920.0	939.3	974.4	1014.7	1030.4
45°	872.7	890.2	934.1	979.6	997.1
47.5°	821.9	842.9	890.2	944.6	965.6
50°	767.6	793.9	848.2	907.8	930.6
52.5°	713.2	743.0	804.4	871.0	895.5
55°	660.7	688.7	762.3	834.2	860.5
57.5°	602.8	637.9	718.5	795.6	821.9
60°	543.3	581.8	674.7	755.3	783.3
62.5°	483.7	527.5	632.6	713.2	743.0
65°	424.1	473.2	583.6	669.4	699.2
67.5°	366.3	420.6	538.0	623.9	653.7
70°	299.7	368.0	488.9	573.1	602.8
72.5°	238.3	317.2	441.6	520.5	546.8
75°	184.0	268.1	389.0	460.9	471.4
77.5°	134.9	219.1	334.7	359.3	361.0
80°	91.1	175.2	255.9	252.4	255.9
82.5°	59.6	131.4	161.2	180.5	182.3
85°	35.0	77.1	94.6	105.1	106.9
87.5°	17.5	26.3	33.3	35.0	38.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)