

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: P313852

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-CP125-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: P313852  
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: 24FCZ2-35HE-UNV-L83050-CP125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" 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**

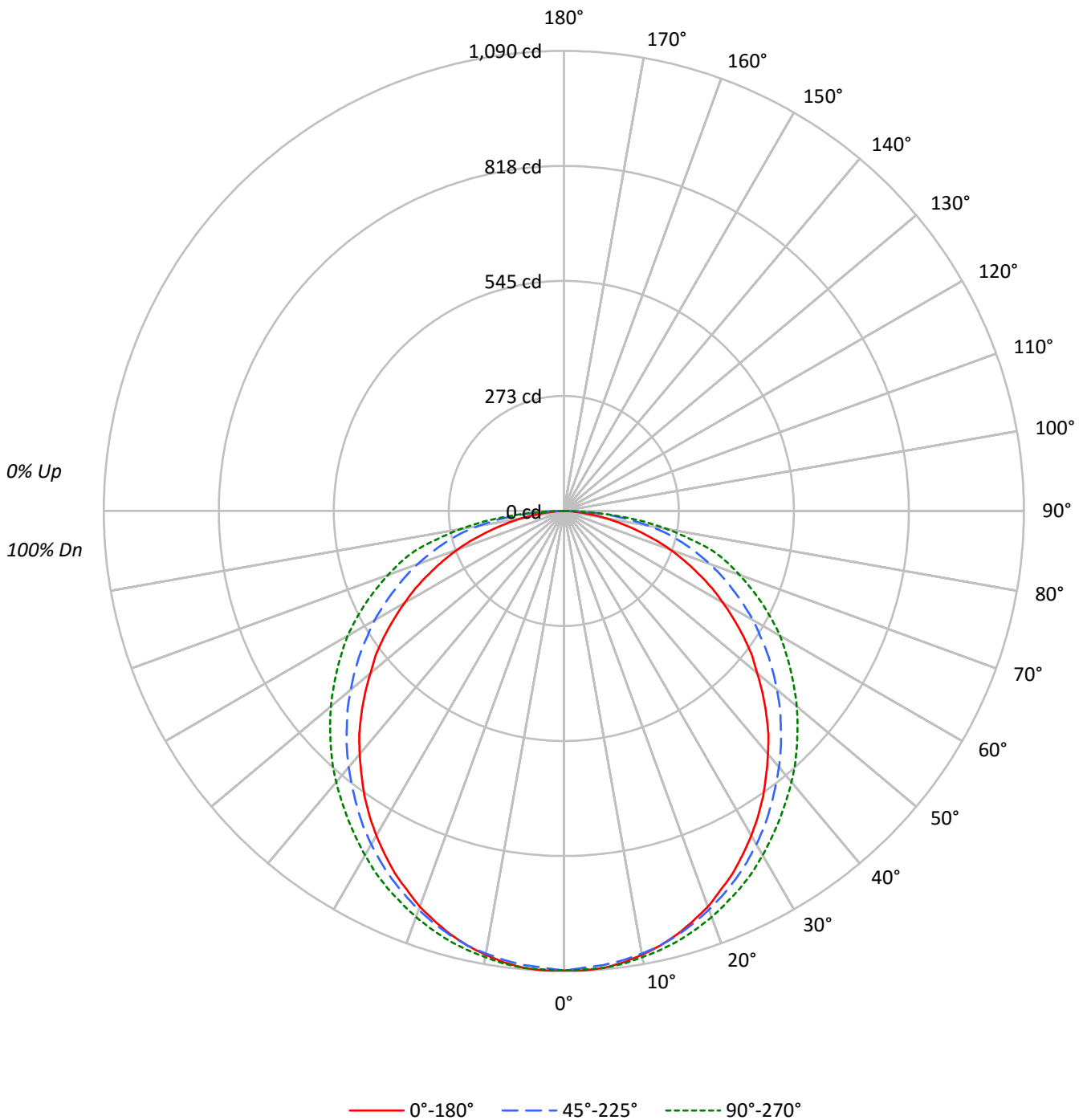
Lumens per Lamp: N/A  
Luminaire Lumens: 3301.0 lumens  
Efficiency: N/A  
Efficacy: 124.1 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	1465	1465	1465
5°	1467	1459	1467
10°	1459	1454	1466
15°	1446	1449	1468
20°	1429	1440	1466
25°	1406	1429	1465
30°	1380	1417	1463
35°	1353	1403	1464
40°	1322	1393	1473
45°	1290	1384	1486
50°	1252	1380	1508
55°	1220	1382	1539
60°	1173	1394	1591
65°	1119	1409	1649
70°	1060	1452	1741
75°	945	1514	1902
80°	806	1604	1943
85°	574	1589	1860



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.0	3.1
10°-20°	294.6	8.9
20°-30°	445.0	13.5
30°-40°	536.3	16.2
40°-50°	563.0	17.1
50°-60°	526.7	16.0
60°-70°	435.0	13.2
70°-80°	296.4	9.0
80°-90°	101.1	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°	842.6	25.5
0°-40°	1378.9	41.8
0°-60°	2468.6	74.8
0°-90°	3301.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3301.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1089	1089	1089	1089	1089	
5°	1086	1085	1080	1086	1086	103
15°	1038	1039	1040	1051	1054	293
25°	947	952	963	981	987	436
35°	824	832	854	883	892	515
45°	678	692	727	767	781	523
55°	520	541	589	637	656	464
65°	352	381	442	498	518	349
75°	182	223	291	346	366	194
85°	37	73	103	116	120	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1088.6	1088.6	1088.6	1088.6	1088.6
2.5°	1089.7	1088.6	1083.2	1088.6	1087.5
5°	1086.5	1085.4	1079.9	1086.5	1086.5
7.5°	1078.8	1078.8	1073.3	1081.0	1082.1
10°	1067.8	1067.8	1064.5	1073.3	1073.3
12.5°	1054.7	1054.7	1054.7	1063.5	1064.5
15°	1038.3	1039.4	1040.5	1051.4	1053.6
17.5°	1018.5	1020.7	1024.0	1037.2	1039.4
20°	997.7	999.9	1005.4	1020.7	1024.0
22.5°	971.5	976.9	984.6	1002.1	1005.4
25°	947.4	951.7	962.7	981.3	986.8
27.5°	917.8	924.4	938.6	958.3	966.0
30°	888.2	894.8	912.3	935.3	941.9
32.5°	856.5	866.3	884.9	909.0	916.7
35°	823.6	832.4	854.3	882.7	891.5
37.5°	787.5	799.5	823.6	854.3	865.2
40°	752.4	765.6	792.9	825.8	838.9
42.5°	717.4	730.5	761.2	798.4	811.6
45°	677.9	692.2	727.2	766.6	780.9
47.5°	638.5	656.0	694.4	736.0	751.3
50°	598.0	617.7	659.3	703.1	720.6
52.5°	561.8	580.5	624.3	671.4	687.8
55°	520.2	541.0	589.2	637.4	656.0
57.5°	477.5	500.5	552.0	604.6	623.2
60°	435.9	461.1	518.0	570.6	591.4
62.5°	395.4	420.6	479.7	534.5	555.3
65°	351.6	381.1	442.5	498.3	518.0
67.5°	309.9	341.7	406.3	461.1	480.8
70°	269.4	300.1	369.1	422.8	442.5
72.5°	225.6	260.7	329.7	385.5	406.3
75°	181.8	223.4	291.3	346.1	365.8
77.5°	141.3	184.0	251.9	296.8	306.7
80°	104.0	147.9	207.0	238.8	250.8
82.5°	66.8	110.6	157.7	180.7	190.6
85°	37.2	73.4	102.9	116.1	120.5
87.5°	15.3	31.8	41.6	47.1	47.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)