

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: P314178

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-S-CP125-W2A-U-4500K**

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: P314178  
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: 24FCZ2-30HE-UNV-L83050-S-CP125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 4500K 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**

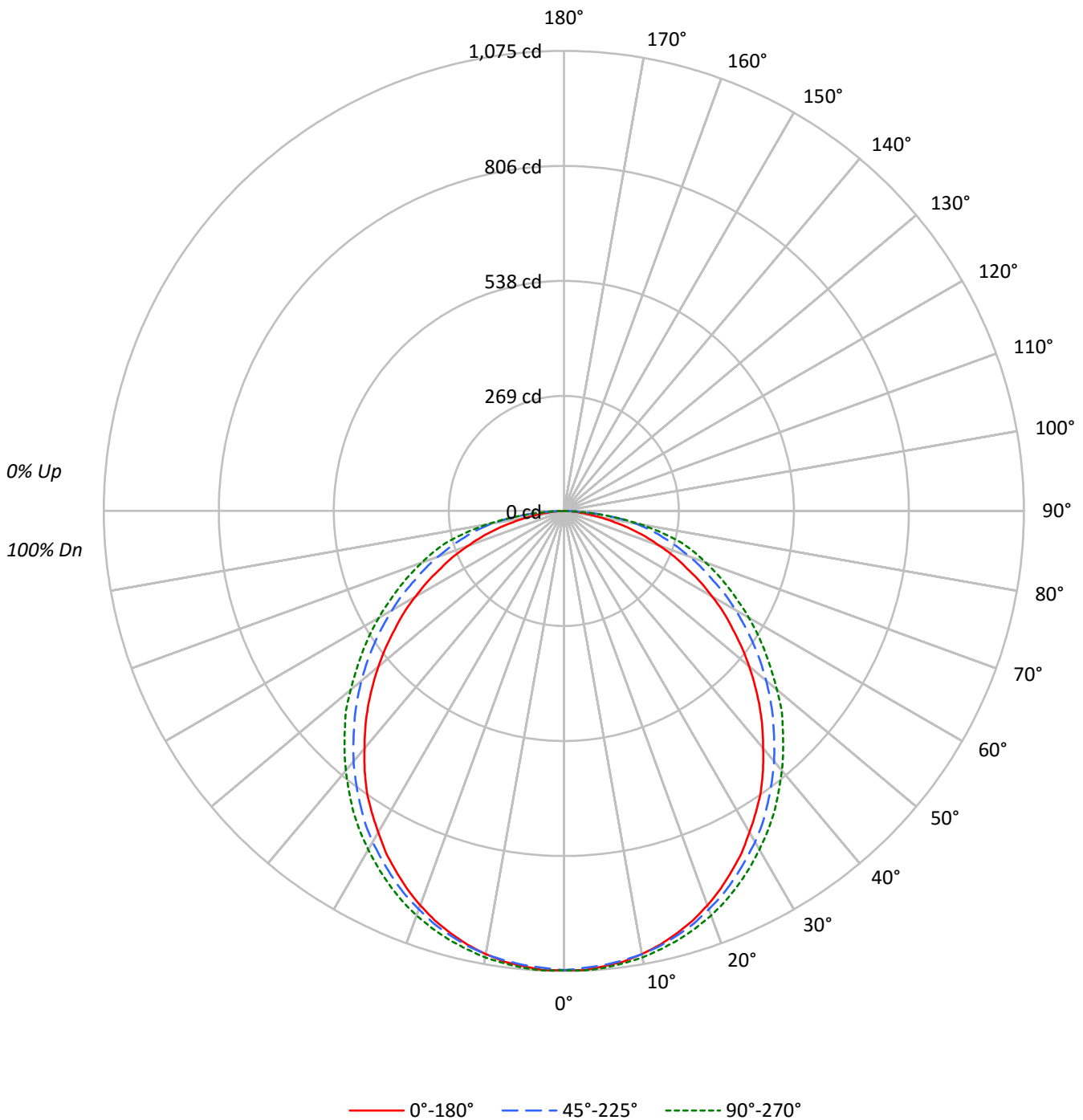
Lumens per Lamp: N/A  
Luminaire Lumens: 3054.0 lumens  
Efficiency: N/A  
Efficacy: 138.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1444	1444	1444
5°	1442	1439	1448
10°	1437	1437	1447
15°	1423	1430	1444
20°	1404	1418	1440
25°	1378	1404	1431
30°	1347	1388	1420
35°	1318	1365	1408
40°	1273	1343	1392
45°	1231	1316	1377
50°	1184	1292	1360
55°	1131	1267	1347
60°	1078	1248	1344
65°	1010	1226	1353
70°	935	1233	1389
75°	837	1255	1468
80°	676	1330	1436
85°	509	1169	1138



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.6	3.3
10°-20°	290.2	9.5
20°-30°	436.3	14.3
30°-40°	519.7	17.0
40°-50°	531.9	17.4
50°-60°	478.8	15.7
60°-70°	376.0	12.3
70°-80°	244.0	8.0
80°-90°	75.5	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°	828.1	27.1
0°-40°	1347.7	44.1
0°-60°	2358.4	77.2
0°-90°	3054.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3054.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1073	1073	1073	1073	1073	
5°	1068	1070	1065	1071	1072	101
15°	1022	1024	1026	1035	1037	288
25°	928	936	946	961	964	428
35°	802	812	831	852	858	500
45°	647	663	692	718	724	499
55°	482	504	540	568	574	432
65°	317	342	385	417	425	316
75°	161	192	242	274	282	170
85°	33	61	76	74	74	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1072.9	1072.9	1072.9	1072.9	1072.9
2.5°	1073.9	1073.9	1069.0	1073.9	1074.8
5°	1068.0	1070.0	1065.1	1071.0	1071.9
7.5°	1062.2	1062.2	1059.3	1065.1	1066.1
10°	1051.5	1052.5	1051.5	1058.3	1059.3
12.5°	1038.0	1039.9	1040.9	1047.7	1048.6
15°	1021.5	1024.4	1026.3	1035.1	1037.0
17.5°	1003.0	1006.0	1010.8	1020.5	1022.4
20°	980.7	984.6	990.4	1003.0	1006.0
22.5°	956.5	960.4	970.1	981.7	986.6
25°	928.4	936.1	945.8	961.3	964.2
27.5°	900.2	907.0	919.6	936.1	940.0
30°	867.2	877.9	893.4	909.9	913.8
32.5°	835.2	845.9	864.3	881.8	886.6
35°	802.2	811.9	831.3	851.7	857.5
37.5°	764.4	777.0	798.4	818.7	824.6
40°	724.6	740.2	764.4	785.8	792.5
42.5°	686.8	703.3	727.5	750.8	758.6
45°	647.0	662.6	691.7	717.8	723.7
47.5°	606.3	623.8	654.8	681.0	690.7
50°	565.5	584.0	617.0	644.1	649.9
52.5°	524.8	544.2	579.1	608.2	611.1
55°	482.1	503.5	540.3	568.5	574.3
57.5°	443.3	461.8	501.5	530.6	537.4
60°	400.6	421.0	463.7	490.9	499.6
62.5°	359.9	381.2	425.9	453.0	460.8
65°	317.2	341.5	385.1	417.1	424.9
67.5°	280.3	303.6	350.2	381.2	389.0
70°	237.7	263.9	313.3	345.3	353.1
72.5°	200.8	228.0	277.4	308.5	320.1
75°	161.0	192.1	241.5	274.5	282.3
77.5°	122.2	158.1	208.6	233.8	233.8
80°	87.3	125.1	171.7	183.3	185.3
82.5°	57.2	94.1	127.1	126.1	126.1
85°	33.0	61.1	75.7	73.7	73.7
87.5°	12.6	25.2	27.2	27.2	26.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)