

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: P313688

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-RDP-CP250-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: P313688
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-RDP-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 3357.0 lumens
Efficiency: N/A
Efficacy: 74.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

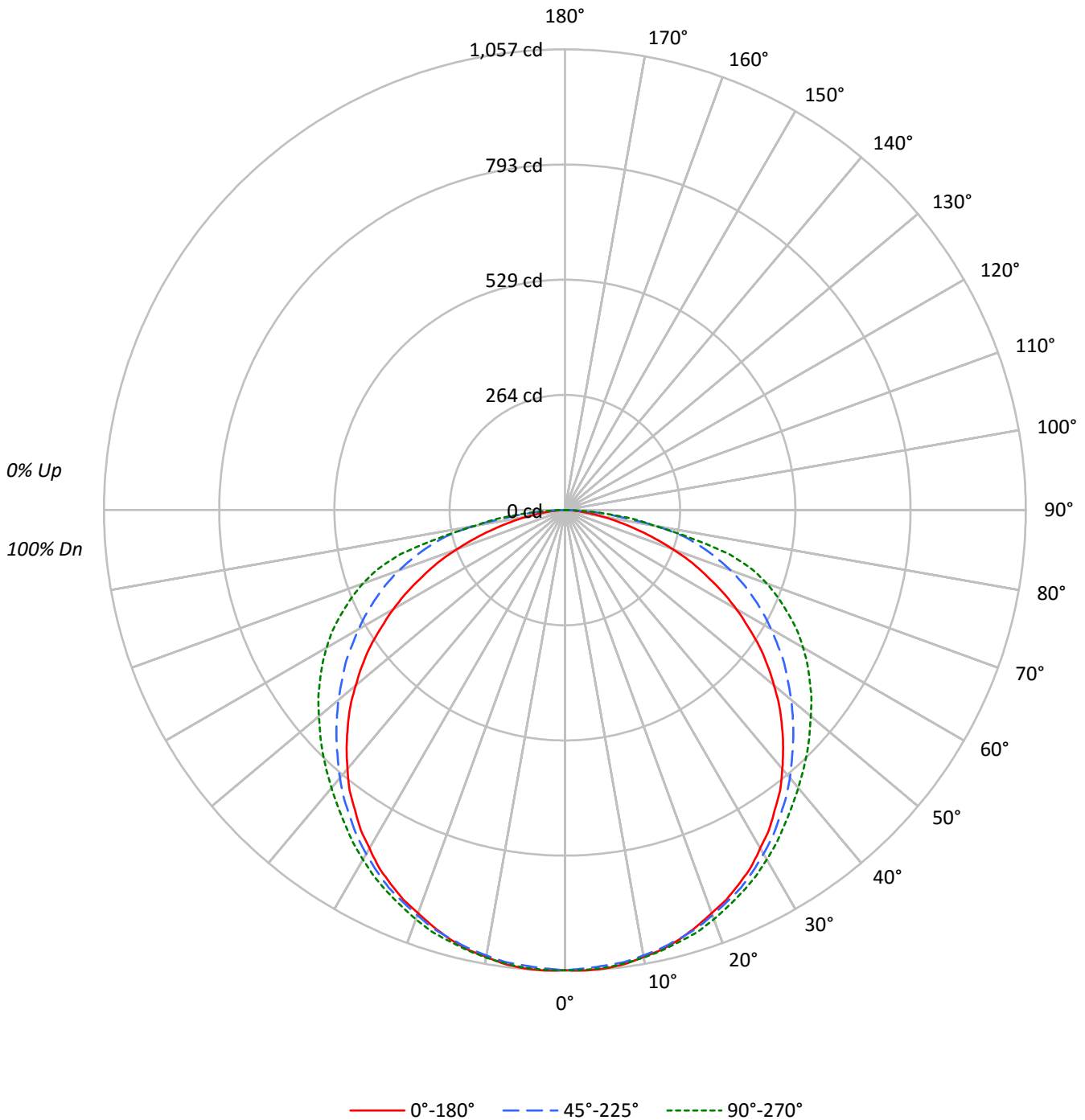
Input Watts (W): 45.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1420	1420	1420
5°	1426	1417	1424
10°	1422	1417	1424
15°	1419	1417	1426
20°	1409	1416	1431
25°	1404	1419	1434
30°	1392	1415	1438
35°	1378	1411	1444
40°	1363	1410	1462
45°	1340	1410	1495
50°	1311	1419	1541
55°	1277	1441	1609
60°	1223	1470	1698
65°	1145	1521	1802
70°	1042	1592	1939
75°	883	1679	2025
80°	697	1690	1639
85°	514	1286	1439



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.1	3.0
10°-20°	288.2	8.6
20°-30°	440.7	13.1
30°-40°	538.8	16.0
40°-50°	574.2	17.1
50°-60°	549.0	16.4
60°-70°	465.1	13.9
70°-80°	312.6	9.3
80°-90°	88.2	2.6
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°	829.1	24.7
0°-40°	1367.9	40.7
0°-60°	2491.1	74.2
0°-90°	3357.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3357.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1056	1056	1056	1056	1056	
5°	1056	1054	1049	1054	1054	100
15°	1019	1019	1017	1026	1024	287
25°	946	949	956	964	966	436
35°	839	846	859	876	879	526
45°	704	716	741	773	786	543
55°	544	564	614	663	686	485
65°	360	396	478	541	566	357
75°	170	232	323	378	390	182
85°	33	68	83	90	93	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1055.7	1055.7	1055.7	1055.7	1055.7
2.5°	1057.3	1057.3	1052.4	1055.7	1055.7
5°	1055.7	1054.0	1049.0	1054.0	1054.0
7.5°	1050.7	1049.0	1045.7	1050.7	1049.0
10°	1040.7	1040.7	1037.4	1042.4	1042.4
12.5°	1032.4	1030.7	1029.0	1035.7	1034.0
15°	1019.0	1019.0	1017.4	1025.7	1024.0
17.5°	1002.4	1004.1	1005.7	1012.4	1014.1
20°	984.1	987.4	989.1	999.1	999.1
22.5°	967.4	969.1	972.4	982.4	982.4
25°	945.8	949.1	955.8	964.1	965.8
27.5°	924.1	925.8	934.1	945.8	947.4
30°	895.8	900.8	910.8	924.1	925.8
32.5°	870.9	875.8	887.5	900.8	904.2
35°	839.2	845.9	859.2	875.8	879.2
37.5°	810.9	815.9	832.6	850.9	855.9
40°	775.9	785.9	802.6	824.2	832.6
42.5°	741.0	751.0	770.9	799.3	809.2
45°	704.3	716.0	741.0	772.6	785.9
47.5°	667.7	681.0	709.3	746.0	761.0
50°	626.1	642.7	677.7	719.3	736.0
52.5°	586.1	606.1	644.4	691.0	712.7
55°	544.5	564.5	614.4	662.7	686.0
57.5°	497.9	524.5	579.5	634.4	659.4
60°	454.6	479.6	546.2	606.1	631.1
62.5°	408.0	441.3	512.9	576.1	601.1
65°	359.7	396.3	477.9	541.2	566.1
67.5°	316.4	356.3	442.9	506.2	531.2
70°	264.8	314.7	404.6	467.9	492.9
72.5°	216.5	271.4	364.7	426.3	449.6
75°	169.8	231.5	323.0	378.0	389.6
77.5°	126.5	191.5	279.7	303.1	294.7
80°	89.9	153.2	218.1	206.5	211.5
82.5°	58.3	116.6	134.9	153.2	158.2
85°	33.3	68.3	83.3	89.9	93.2
87.5°	15.0	25.0	33.3	33.3	31.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)