

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: P310309

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-RDP-CP250-W2A-U-6500K**

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: P310309  
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-L82765-RDP-CP250-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET  
Light Source: (336) 6500K 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: 3310.0 lumens  
Efficiency: N/A  
Efficacy: 73.6 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

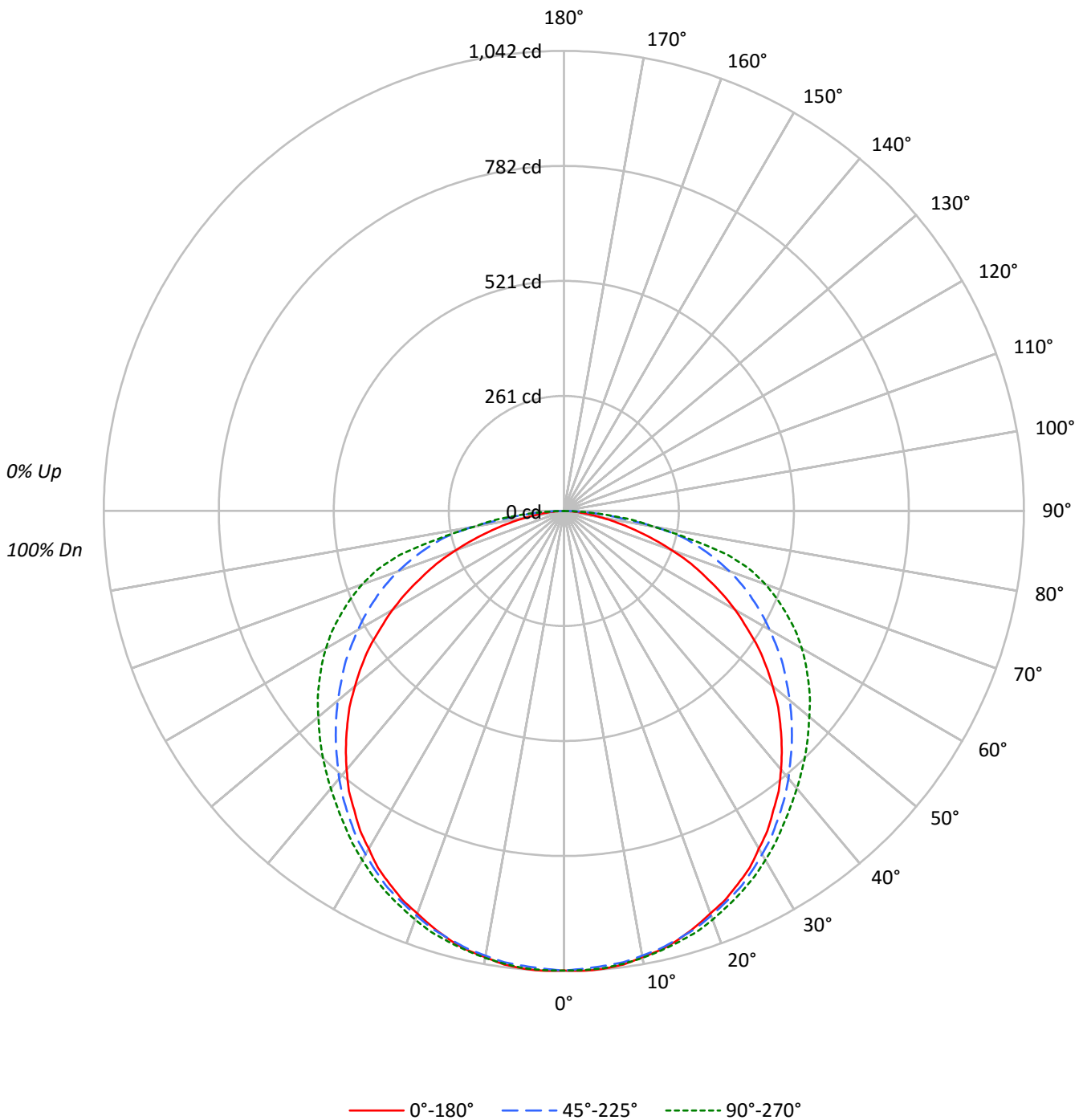
Input Watts (W): 45  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1401	1401	1401
5°	1406	1397	1404
10°	1402	1397	1404
15°	1400	1397	1406
20°	1389	1396	1411
25°	1384	1399	1414
30°	1372	1395	1418
35°	1359	1392	1424
40°	1344	1390	1442
45°	1322	1390	1474
50°	1292	1399	1519
55°	1259	1421	1587
60°	1206	1449	1674
65°	1129	1500	1777
70°	1027	1570	1912
75°	871	1656	1997
80°	687	1667	1616
85°	506	1267	1419



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.7	3.0
10°-20°	284.2	8.6
20°-30°	434.6	13.1
30°-40°	531.2	16.0
40°-50°	566.2	17.1
50°-60°	541.3	16.4
60°-70°	458.6	13.9
70°-80°	308.2	9.3
80°-90°	86.9	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°	817.5	24.7
0°-40°	1348.7	40.7
0°-60°	2456.2	74.2
0°-90°	3310.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3310.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1041	1041	1041	1041	1041	
5°	1041	1039	1034	1039	1039	99
15°	1005	1005	1003	1011	1010	283
25°	932	936	942	951	952	430
35°	828	834	847	864	867	518
45°	694	706	731	762	775	536
55°	537	557	606	653	676	478
65°	355	391	471	534	558	352
75°	168	228	318	373	384	179
85°	33	67	82	89	92	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1040.9	1040.9	1040.9	1040.9	1040.9
2.5°	1042.5	1042.5	1037.6	1040.9	1040.9
5°	1040.9	1039.3	1034.3	1039.3	1039.3
7.5°	1036.0	1034.3	1031.0	1036.0	1034.3
10°	1026.1	1026.1	1022.8	1027.8	1027.8
12.5°	1017.9	1016.3	1014.6	1021.2	1019.6
15°	1004.8	1004.8	1003.1	1011.3	1009.7
17.5°	988.4	990.0	991.6	998.2	999.9
20°	970.3	973.6	975.2	985.1	985.1
22.5°	953.9	955.5	958.8	968.7	968.7
25°	932.5	935.8	942.4	950.6	952.2
27.5°	911.2	912.8	921.0	932.5	934.2
30°	883.3	888.2	898.1	911.2	912.8
32.5°	858.7	863.6	875.1	888.2	891.5
35°	827.5	834.0	847.2	863.6	866.9
37.5°	799.6	804.5	820.9	839.0	843.9
40°	765.1	774.9	791.3	812.7	820.9
42.5°	730.6	740.5	760.2	788.1	797.9
45°	694.5	706.0	730.6	761.8	774.9
47.5°	658.4	671.5	699.4	735.5	750.3
50°	617.3	633.7	668.2	709.3	725.7
52.5°	577.9	597.6	635.4	681.3	702.7
55°	536.9	556.6	605.8	653.4	676.4
57.5°	490.9	517.2	571.3	625.5	650.2
60°	448.2	472.8	538.5	597.6	622.2
62.5°	402.2	435.1	505.7	568.1	592.7
65°	354.6	390.7	471.2	533.6	558.2
67.5°	311.9	351.3	436.7	499.1	523.7
70°	261.0	310.3	399.0	461.3	486.0
72.5°	213.4	267.6	359.6	420.3	443.3
75°	167.5	228.2	318.5	372.7	384.2
77.5°	124.8	188.8	275.8	298.8	290.6
80°	88.7	151.0	215.1	203.6	208.5
82.5°	57.5	114.9	133.0	151.0	156.0
85°	32.8	67.3	82.1	88.7	91.9
87.5°	14.8	24.6	32.8	32.8	31.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)