

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: P310308

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-RDP-CP250-W2A-U-5700K**

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: P310308
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 5700K 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: 3302.0 lumens
Efficiency: N/A
Efficacy: 74.5 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

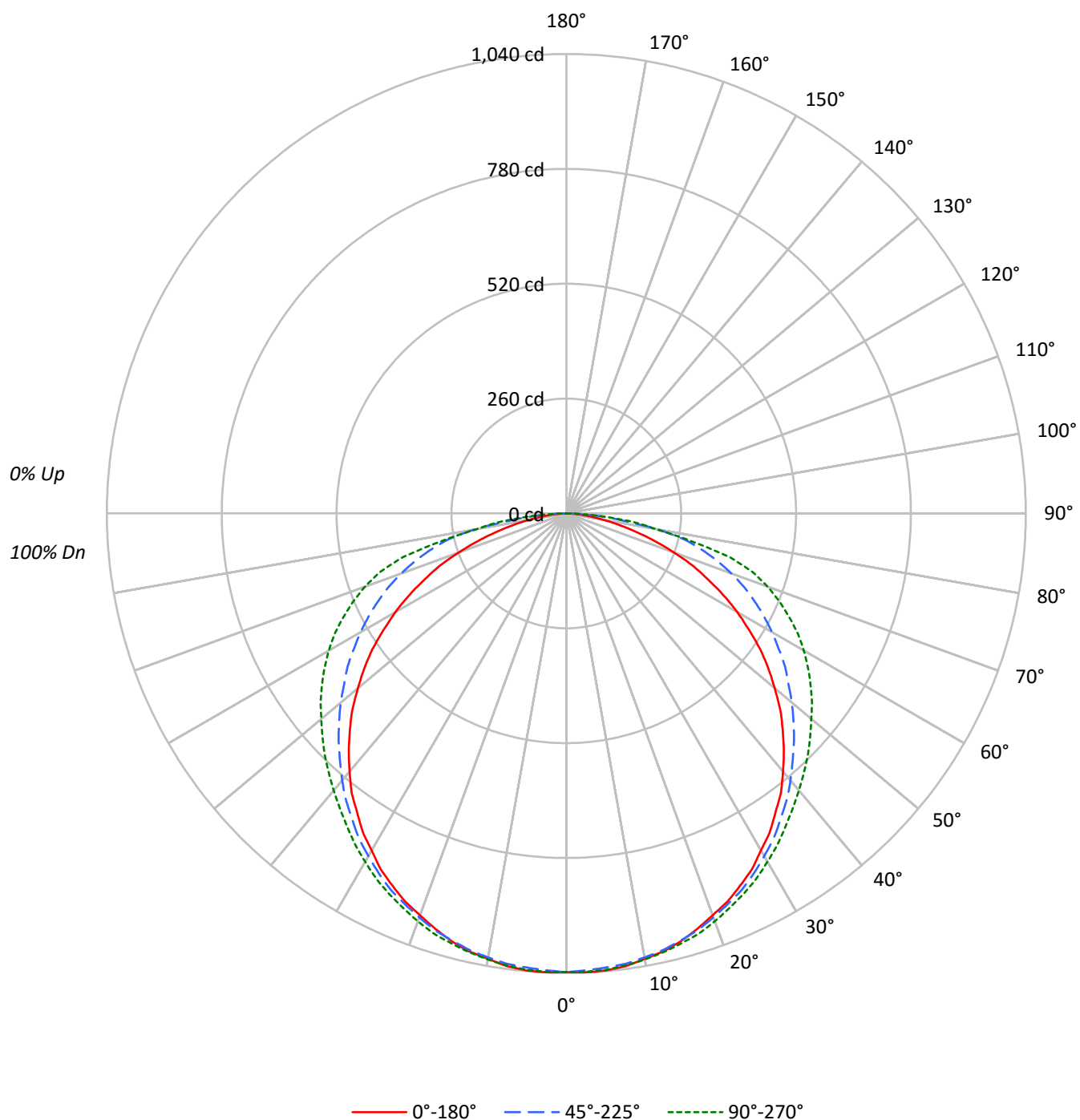
Input Watts (W): 44.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	1397	1397	1397
5°	1402	1394	1400
10°	1398	1394	1401
15°	1396	1394	1403
20°	1386	1393	1407
25°	1381	1396	1410
30°	1369	1392	1415
35°	1356	1388	1420
40°	1340	1387	1438
45°	1318	1387	1471
50°	1289	1395	1515
55°	1256	1418	1583
60°	1203	1446	1670
65°	1126	1497	1773
70°	1024	1566	1907
75°	869	1652	1993
80°	685	1663	1612
85°	506	1264	1416



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.5	3.0
10°-20°	283.5	8.6
20°-30°	433.5	13.1
30°-40°	530.0	16.0
40°-50°	564.8	17.1
50°-60°	540.0	16.4
60°-70°	457.5	13.9
70°-80°	307.5	9.3
80°-90°	86.7	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°	815.5	24.7
0°-40°	1345.4	40.7
0°-60°	2450.3	74.2
0°-90°	3302.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3302.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1038	1038	1038	1038	1038	
5°	1038	1037	1032	1037	1037	99
15°	1002	1002	1001	1009	1007	283
25°	930	934	940	948	950	429
35°	826	832	845	862	865	517
45°	693	704	729	760	773	534
55°	536	555	604	652	675	477
65°	354	390	470	532	557	351
75°	167	228	318	372	383	179
85°	33	67	82	88	92	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1038.4	1038.4	1038.4	1038.4	1038.4
2.5°	1040.0	1040.0	1035.1	1038.4	1038.4
5°	1038.4	1036.7	1031.8	1036.7	1036.7
7.5°	1033.5	1031.8	1028.6	1033.5	1031.8
10°	1023.6	1023.6	1020.4	1025.3	1025.3
12.5°	1015.5	1013.8	1012.2	1018.7	1017.1
15°	1002.4	1002.4	1000.7	1008.9	1007.3
17.5°	986.0	987.6	989.2	995.8	997.4
20°	968.0	971.2	972.9	982.7	982.7
22.5°	951.6	953.2	956.5	966.3	966.3
25°	930.3	933.6	940.1	948.3	949.9
27.5°	909.0	910.6	918.8	930.3	931.9
30°	881.2	886.1	895.9	909.0	910.6
32.5°	856.6	861.5	873.0	886.1	889.3
35°	825.5	832.0	845.1	861.5	864.8
37.5°	797.6	802.5	818.9	836.9	841.8
40°	763.2	773.1	789.4	810.7	818.9
42.5°	728.8	738.7	758.3	786.2	796.0
45°	692.8	704.3	728.8	760.0	773.1
47.5°	656.8	669.9	697.7	733.7	748.5
50°	615.8	632.2	666.6	707.5	723.9
52.5°	576.5	596.2	633.8	679.7	701.0
55°	535.6	555.2	604.4	651.9	674.8
57.5°	489.7	515.9	570.0	624.0	648.6
60°	447.1	471.7	537.2	596.2	620.7
62.5°	401.3	434.0	504.5	566.7	591.3
65°	353.8	389.8	470.1	532.3	556.9
67.5°	311.2	350.5	435.7	497.9	522.5
70°	260.4	309.6	398.0	460.2	484.8
72.5°	212.9	267.0	358.7	419.3	442.2
75°	167.1	227.7	317.7	371.8	383.3
77.5°	124.5	188.4	275.2	298.1	289.9
80°	88.4	150.7	214.6	203.1	208.0
82.5°	57.3	114.6	132.7	150.7	155.6
85°	32.8	67.2	81.9	88.4	91.7
87.5°	14.7	24.6	32.8	32.8	31.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)