

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: P310305

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-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: P310305
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-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: 3217.0 lumens
Efficiency: N/A
Efficacy: 73.3 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

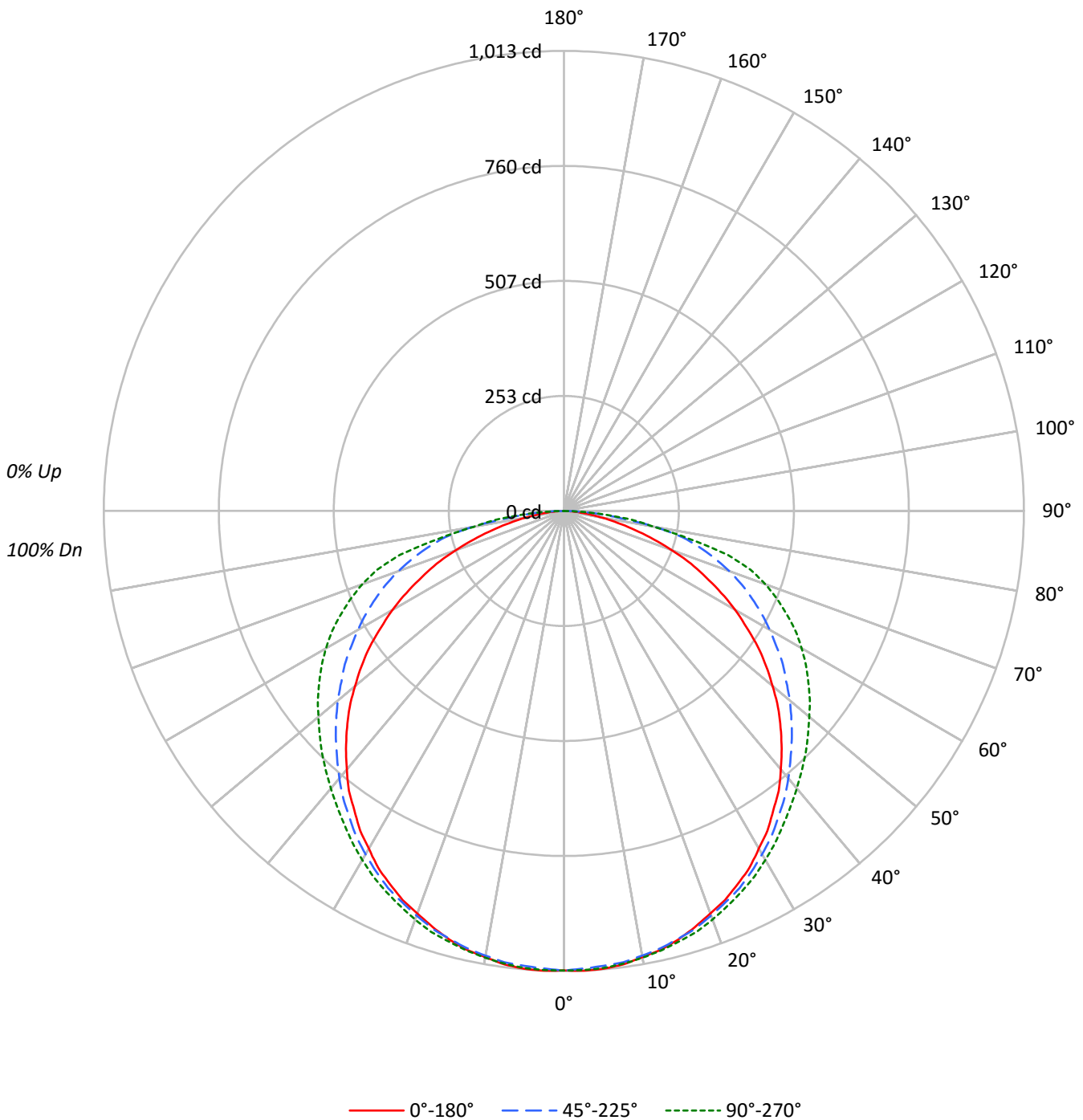
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1361	1361	1361
5°	1366	1358	1364
10°	1363	1358	1365
15°	1360	1358	1367
20°	1350	1357	1371
25°	1345	1360	1374
30°	1334	1356	1378
35°	1321	1352	1384
40°	1306	1351	1401
45°	1284	1351	1433
50°	1256	1359	1476
55°	1224	1381	1542
60°	1172	1408	1628
65°	1097	1458	1727
70°	998	1525	1858
75°	846	1609	1941
80°	668	1619	1571
85°	492	1232	1380



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.0	3.0
10°-20°	276.2	8.6
20°-30°	422.3	13.1
30°-40°	516.3	16.0
40°-50°	550.3	17.1
50°-60°	526.1	16.4
60°-70°	445.7	13.9
70°-80°	299.6	9.3
80°-90°	84.5	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°	794.5	24.7
0°-40°	1310.8	40.7
0°-60°	2387.2	74.2
0°-90°	3217.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3217.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1012	1012	1012	1012	1012	
5°	1012	1010	1005	1010	1010	96
15°	976	976	975	983	981	275
25°	906	910	916	924	926	418
35°	804	811	823	839	842	504
45°	675	686	710	740	753	521
55°	522	541	589	635	657	465
65°	345	380	458	519	542	342
75°	163	222	310	362	373	174
85°	32	65	80	86	89	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1011.7	1011.7	1011.7	1011.7	1011.7
2.5°	1013.3	1013.3	1008.5	1011.7	1011.7
5°	1011.7	1010.1	1005.3	1010.1	1010.1
7.5°	1006.9	1005.3	1002.1	1006.9	1005.3
10°	997.3	997.3	994.1	998.9	998.9
12.5°	989.3	987.7	986.1	992.5	990.9
15°	976.5	976.5	975.0	982.9	981.3
17.5°	960.6	962.2	963.8	970.2	971.8
20°	943.0	946.2	947.8	957.4	957.4
22.5°	927.1	928.7	931.9	941.4	941.4
25°	906.3	909.5	915.9	923.9	925.5
27.5°	885.6	887.2	895.2	906.3	907.9
30°	858.5	863.3	872.8	885.6	887.2
32.5°	834.5	839.3	850.5	863.3	866.4
35°	804.2	810.6	823.4	839.3	842.5
37.5°	777.1	781.9	797.8	815.4	820.2
40°	743.6	753.2	769.1	789.9	797.8
42.5°	710.1	719.6	738.8	765.9	775.5
45°	675.0	686.1	710.1	740.4	753.2
47.5°	639.9	652.6	679.8	714.9	729.2
50°	600.0	615.9	649.4	689.3	705.3
52.5°	561.7	580.8	617.5	662.2	682.9
55°	521.8	540.9	588.8	635.1	657.4
57.5°	477.1	502.6	555.3	608.0	631.9
60°	435.6	459.6	523.4	580.8	604.8
62.5°	390.9	422.9	491.5	552.1	576.0
65°	344.7	379.8	458.0	518.6	542.5
67.5°	303.2	341.5	424.4	485.1	509.0
70°	253.7	301.6	387.7	448.4	472.3
72.5°	207.4	260.1	349.5	408.5	430.8
75°	162.8	221.8	309.6	362.2	373.4
77.5°	121.3	183.5	268.1	290.4	282.4
80°	86.2	146.8	209.0	197.9	202.7
82.5°	55.8	111.7	129.2	146.8	151.6
85°	31.9	65.4	79.8	86.2	89.4
87.5°	14.4	23.9	31.9	31.9	30.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)