

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: P314437

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-S-CP250-W2A-U-4000K**

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: P314437
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: 24FCZ2-55HE-UNV-L83050-S-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 4000K 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: 5196.0 lumens
Efficiency: N/A
Efficacy: 117.8 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

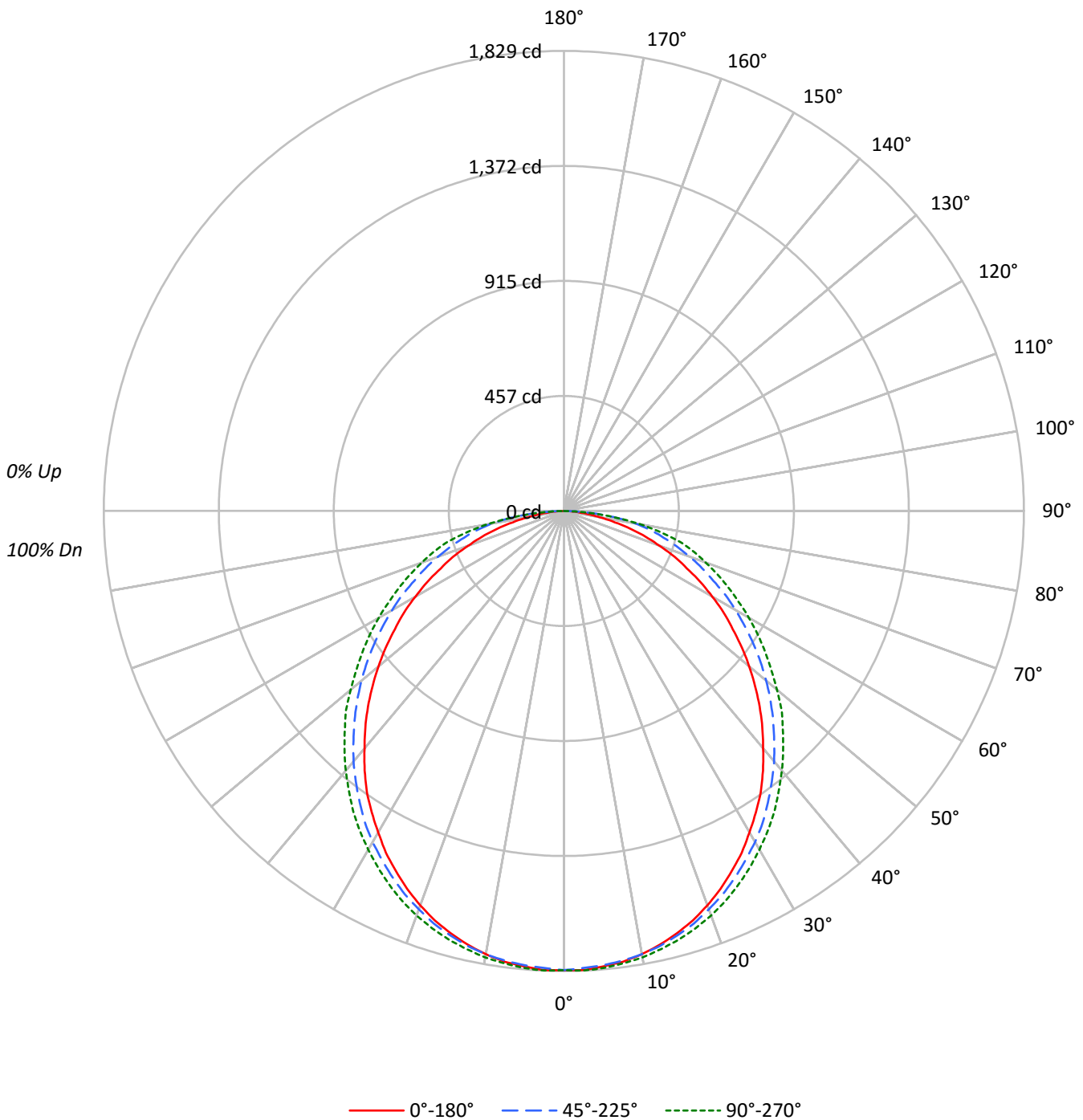
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2456	2456	2456
5°	2454	2448	2463
10°	2444	2444	2462
15°	2421	2432	2458
20°	2389	2413	2451
25°	2345	2389	2435
30°	2292	2362	2415
35°	2242	2323	2396
40°	2165	2284	2368
45°	2095	2239	2343
50°	2014	2197	2315
55°	1924	2156	2292
60°	1834	2123	2287
65°	1718	2086	2301
70°	1591	2097	2364
75°	1424	2137	2497
80°	1151	2263	2442
85°	866	1987	1936



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.8	3.3
10°-20°	493.8	9.5
20°-30°	742.3	14.3
30°-40°	884.2	17.0
40°-50°	904.9	17.4
50°-60°	814.7	15.7
60°-70°	639.8	12.3
70°-80°	415.2	8.0
80°-90°	128.4	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°	1408.9	27.1
0°-40°	2293.0	44.1
0°-60°	4012.6	77.2
0°-90°	5196.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5196.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1825	1825	1825	1825	1825	
5°	1817	1820	1812	1822	1824	173
15°	1738	1743	1746	1761	1764	490
25°	1580	1593	1609	1636	1640	728
35°	1365	1381	1414	1449	1459	851
45°	1101	1127	1177	1221	1231	849
55°	820	857	919	967	977	735
65°	540	581	655	710	723	537
75°	274	327	411	467	480	290
85°	56	104	129	125	125	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1825.4	1825.4	1825.4	1825.4	1825.4
2.5°	1827.0	1827.0	1818.8	1827.0	1828.7
5°	1817.1	1820.4	1812.2	1822.1	1823.7
7.5°	1807.2	1807.2	1802.3	1812.2	1813.8
10°	1789.1	1790.7	1789.1	1800.6	1802.3
12.5°	1766.0	1769.3	1770.9	1782.5	1784.1
15°	1737.9	1742.9	1746.2	1761.0	1764.3
17.5°	1706.6	1711.5	1719.8	1736.3	1739.6
20°	1668.6	1675.2	1685.1	1706.6	1711.5
22.5°	1627.3	1633.9	1650.4	1670.2	1678.5
25°	1579.5	1592.7	1609.2	1635.6	1640.5
27.5°	1531.6	1543.2	1564.6	1592.7	1599.3
30°	1475.5	1493.6	1520.1	1548.1	1554.7
32.5°	1421.0	1439.2	1470.5	1500.3	1508.5
35°	1364.9	1381.4	1414.4	1449.1	1459.0
37.5°	1300.5	1322.0	1358.3	1393.0	1402.9
40°	1232.9	1259.3	1300.5	1336.9	1348.4
42.5°	1168.5	1196.6	1237.8	1277.4	1290.6
45°	1100.8	1127.3	1176.8	1221.3	1231.2
47.5°	1031.5	1061.2	1114.0	1158.6	1175.1
50°	962.2	993.6	1049.7	1095.9	1105.8
52.5°	892.9	925.9	985.3	1034.8	1039.8
55°	820.3	856.6	919.3	967.2	977.1
57.5°	754.3	785.6	853.3	902.8	914.3
60°	681.6	716.3	788.9	835.1	850.0
62.5°	612.3	648.6	724.5	770.8	784.0
65°	539.7	581.0	655.2	709.7	722.9
67.5°	477.0	516.6	595.8	648.6	661.8
70°	404.4	448.9	533.1	587.6	600.8
72.5°	341.6	387.9	472.0	524.8	544.6
75°	274.0	326.8	411.0	467.1	480.3
77.5°	208.0	269.0	354.8	397.8	397.8
80°	148.5	212.9	292.1	311.9	315.2
82.5°	97.4	160.1	216.2	214.6	214.6
85°	56.1	104.0	128.7	125.4	125.4
87.5°	21.5	42.9	46.2	46.2	44.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)