

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: P314375

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-S-CP125-W2A-U-3000K**

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: P314375
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: 24FCZ2-50HE-UNV-L83050-S-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3000K 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: 4458.0 lumens
Efficiency: N/A
Efficacy: 116.4 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

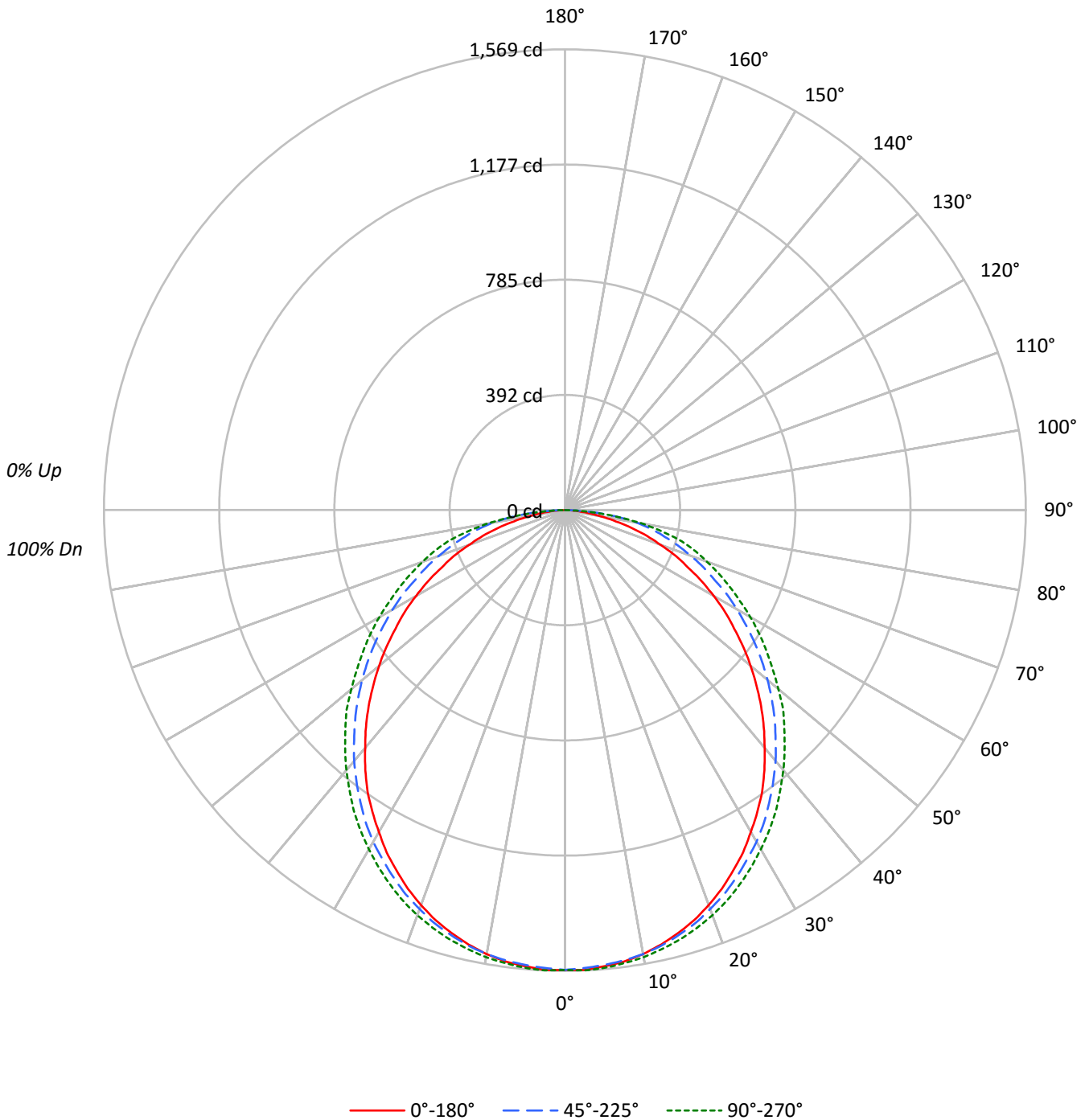
Input Watts (W): 38.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2107	2107	2107
5°	2106	2100	2113
10°	2097	2097	2113
15°	2077	2087	2109
20°	2050	2070	2103
25°	2012	2050	2090
30°	1967	2026	2072
35°	1924	1993	2056
40°	1858	1960	2032
45°	1797	1921	2010
50°	1728	1885	1986
55°	1651	1850	1966
60°	1574	1822	1963
65°	1474	1790	1975
70°	1365	1799	2028
75°	1222	1833	2142
80°	987	1942	2096
85°	743	1706	1661



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.3	3.3
10°-20°	423.7	9.5
20°-30°	636.8	14.3
30°-40°	758.6	17.0
40°-50°	776.4	17.4
50°-60°	699.0	15.7
60°-70°	548.9	12.3
70°-80°	356.3	8.0
80°-90°	110.2	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°	1208.8	27.1
0°-40°	1967.3	44.1
0°-60°	3442.7	77.2
0°-90°	4458.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4458.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1566	1566	1566	1566	1566	
5°	1559	1562	1555	1563	1565	148
15°	1491	1495	1498	1511	1514	420
25°	1355	1366	1381	1403	1408	624
35°	1171	1185	1214	1243	1252	731
45°	944	967	1010	1048	1056	728
55°	704	735	789	830	838	631
65°	463	498	562	609	620	461
75°	235	280	353	401	412	249
85°	48	89	110	108	108	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1566.1	1566.1	1566.1	1566.1	1566.1
2.5°	1567.5	1567.5	1560.5	1567.5	1569.0
5°	1559.0	1561.9	1554.8	1563.3	1564.7
7.5°	1550.5	1550.5	1546.3	1554.8	1556.2
10°	1535.0	1536.4	1535.0	1544.9	1546.3
12.5°	1515.1	1518.0	1519.4	1529.3	1530.7
15°	1491.1	1495.3	1498.2	1510.9	1513.7
17.5°	1464.2	1468.4	1475.5	1489.7	1492.5
20°	1431.6	1437.3	1445.8	1464.2	1468.4
22.5°	1396.2	1401.9	1416.0	1433.0	1440.1
25°	1355.1	1366.5	1380.6	1403.3	1407.5
27.5°	1314.1	1324.0	1342.4	1366.5	1372.1
30°	1265.9	1281.5	1304.2	1328.2	1333.9
32.5°	1219.2	1234.8	1261.7	1287.2	1294.2
35°	1171.1	1185.2	1213.5	1243.3	1251.8
37.5°	1115.8	1134.2	1165.4	1195.1	1203.6
40°	1057.8	1080.4	1115.8	1147.0	1156.9
42.5°	1002.5	1026.6	1062.0	1096.0	1107.3
45°	944.5	967.1	1009.6	1047.9	1056.4
47.5°	885.0	910.5	955.8	994.1	1008.2
50°	825.5	852.4	900.6	940.2	948.7
52.5°	766.1	794.4	845.4	887.8	892.1
55°	703.8	734.9	788.7	829.8	838.3
57.5°	647.1	674.0	732.1	774.6	784.5
60°	584.8	614.6	676.9	716.5	729.3
62.5°	525.3	556.5	621.6	661.3	672.6
65°	463.0	498.4	562.2	608.9	620.2
67.5°	409.2	443.2	511.2	556.5	567.8
70°	346.9	385.2	457.4	504.1	515.4
72.5°	293.1	332.8	405.0	450.3	467.3
75°	235.1	280.4	352.6	400.7	412.1
77.5°	178.4	230.8	304.4	341.3	341.3
80°	127.4	182.7	250.6	267.6	270.5
82.5°	83.5	137.4	185.5	184.1	184.1
85°	48.1	89.2	110.5	107.6	107.6
87.5°	18.4	36.8	39.6	39.6	38.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)