

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: P314389

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-S-CP250-W2A-U-5000K**

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: P314389
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-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 5000K 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: 4750.0 lumens
Efficiency: N/A
Efficacy: 117.9 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

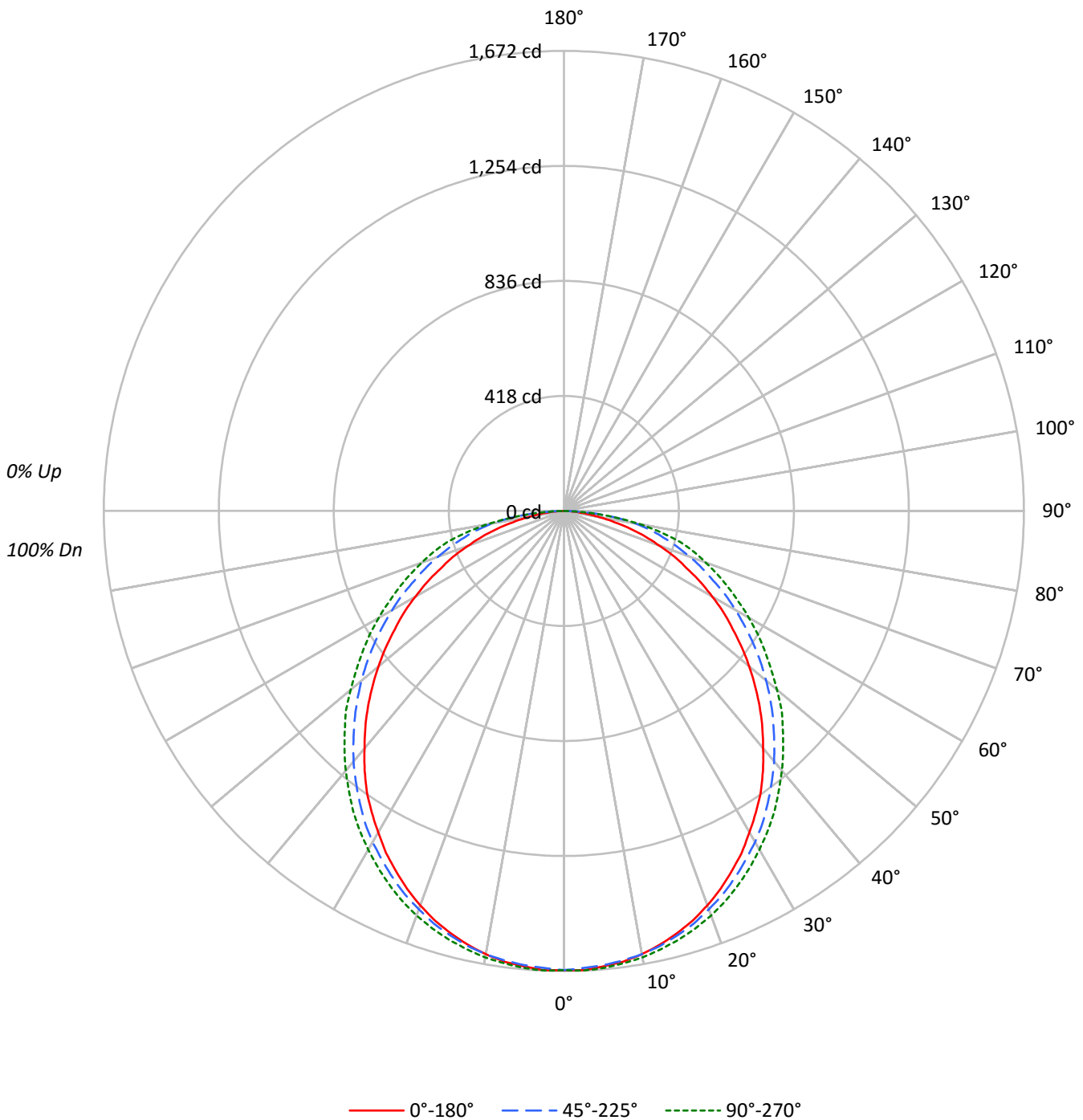
Input Watts (W): 40.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314389

CATALOG NUMBER: 24FCZ2-50HE-UNV-L83050-S-CP250-W2A-U-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P314389

CATALOG NUMBER: 24FCZ2-50HE-UNV-L83050-S-CP250-W2A-U-5000K

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°	2245	2245	2245
5°	2244	2237	2252
10°	2234	2234	2251
15°	2213	2224	2247
20°	2184	2206	2240
25°	2144	2184	2226
30°	2096	2159	2208
35°	2050	2124	2191
40°	1980	2088	2165
45°	1915	2047	2142
50°	1841	2009	2116
55°	1759	1971	2095
60°	1677	1941	2091
65°	1571	1907	2104
70°	1454	1917	2161
75°	1302	1953	2283
80°	1052	2070	2233
85°	792	1817	1771



TEST NUMBER: P314389

CATALOG NUMBER: 24FCZ2-50HE-UNV-L83050-S-CP250-W2A-U-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.0	3.3
10°-20°	451.4	9.5
20°-30°	678.6	14.3
30°-40°	808.3	17.0
40°-50°	827.2	17.4
50°-60°	744.7	15.7
60°-70°	584.9	12.3
70°-80°	379.6	8.0
80°-90°	117.4	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°	1287.9	27.1
0°-40°	2096.2	44.1
0°-60°	3668.2	77.2
0°-90°	4750.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4750.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1669	1669	1669	1669	1669	
5°	1661	1664	1657	1666	1667	158
15°	1589	1593	1596	1610	1613	448
25°	1444	1456	1471	1495	1500	665
35°	1248	1263	1293	1325	1334	778
45°	1006	1030	1076	1116	1126	776
55°	750	783	840	884	893	672
65°	493	531	599	649	661	491
75°	250	299	376	427	439	265
85°	51	95	118	115	115	62
90°	0	0	0	0	0	



TEST NUMBER: P314389

CATALOG NUMBER: 24FCZ2-50HE-UNV-L83050-S-CP250-W2A-U-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1668.7	1668.7	1668.7	1668.7	1668.7
2.5°	1670.2	1670.2	1662.7	1670.2	1671.7
5°	1661.2	1664.2	1656.6	1665.7	1667.2
7.5°	1652.1	1652.1	1647.6	1656.6	1658.1
10°	1635.5	1637.0	1635.5	1646.1	1647.6
12.5°	1614.4	1617.4	1618.9	1629.5	1631.0
15°	1588.7	1593.3	1596.3	1609.9	1612.9
17.5°	1560.1	1564.6	1572.1	1587.2	1590.2
20°	1525.4	1531.4	1540.5	1560.1	1564.6
22.5°	1487.7	1493.7	1508.8	1526.9	1534.4
25°	1443.9	1456.0	1471.1	1495.2	1499.7
27.5°	1400.1	1410.7	1430.3	1456.0	1462.0
30°	1348.8	1365.4	1389.6	1415.2	1421.3
32.5°	1299.1	1315.7	1344.3	1371.5	1379.0
35°	1247.8	1262.8	1293.0	1324.7	1333.8
37.5°	1188.9	1208.5	1241.7	1273.4	1282.5
40°	1127.1	1151.2	1188.9	1222.1	1232.7
42.5°	1068.2	1093.9	1131.6	1167.8	1179.9
45°	1006.4	1030.5	1075.8	1116.5	1125.5
47.5°	943.0	970.1	1018.4	1059.2	1074.2
50°	879.6	908.3	959.6	1001.8	1010.9
52.5°	816.2	846.4	900.7	946.0	950.5
55°	749.9	783.1	840.4	884.1	893.2
57.5°	689.5	718.2	780.0	825.3	835.9
60°	623.1	654.8	721.2	763.4	777.0
62.5°	559.8	592.9	662.4	704.6	716.7
65°	493.4	531.1	599.0	648.8	660.8
67.5°	436.0	472.2	544.7	592.9	605.0
70°	369.7	410.4	487.3	537.1	549.2
72.5°	312.3	354.6	431.5	479.8	497.9
75°	250.5	298.7	375.7	427.0	439.1
77.5°	190.1	245.9	324.4	363.6	363.6
80°	135.8	194.6	267.1	285.2	288.2
82.5°	89.0	146.4	197.6	196.1	196.1
85°	51.3	95.1	117.7	114.7	114.7
87.5°	19.6	39.2	42.2	42.2	40.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)