

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: P314075

Luminaire Tested: **24FCZ2-60HE-UNV-L83050-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: P314075
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-60HE-UNV-L83050-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 5092.0 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

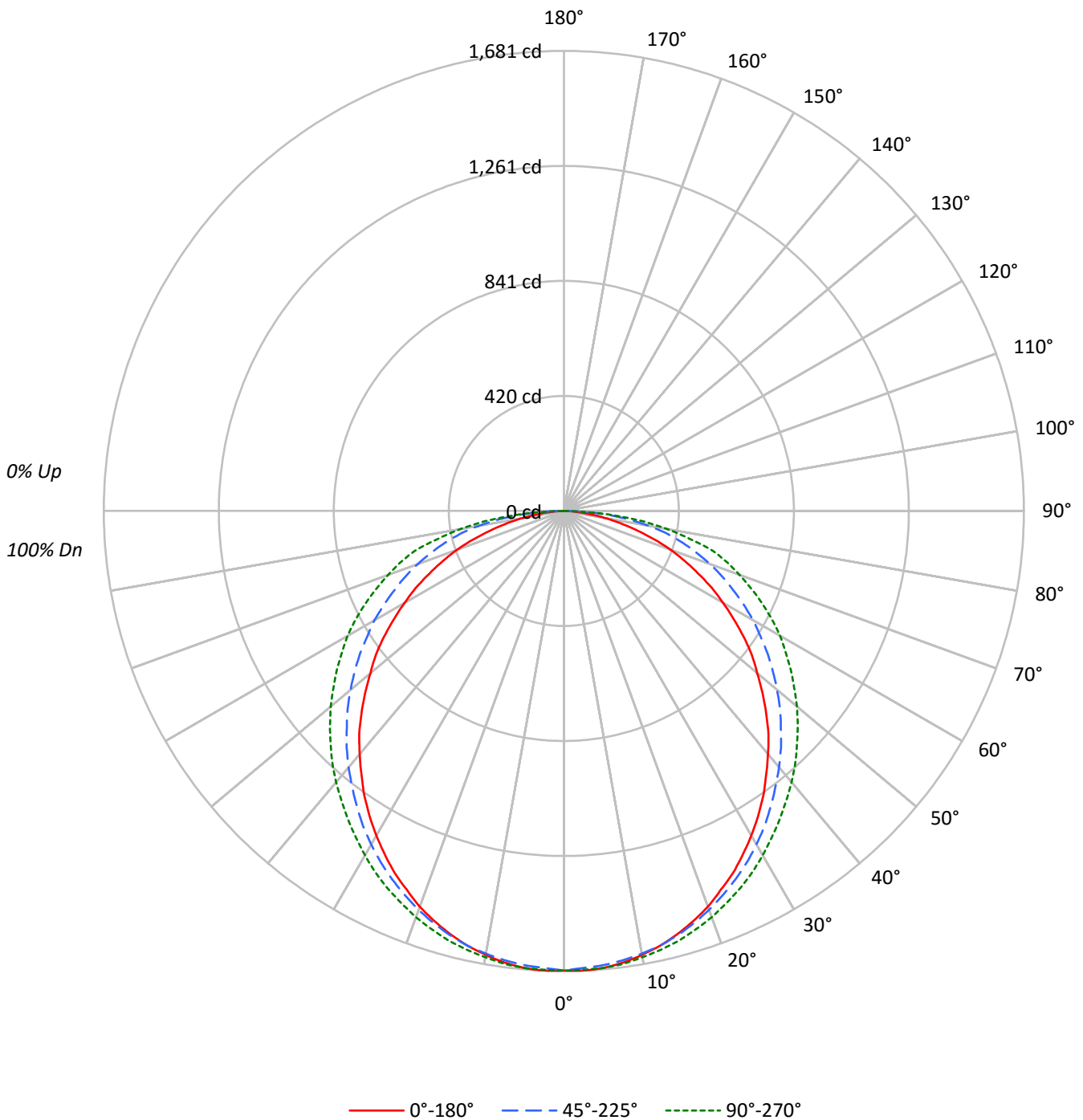
Input Watts (W): 47.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2259	2259	2259
5°	2264	2250	2264
10°	2250	2244	2262
15°	2231	2236	2264
20°	2204	2221	2262
25°	2170	2205	2260
30°	2129	2186	2257
35°	2087	2165	2259
40°	2038	2148	2273
45°	1990	2135	2292
50°	1931	2129	2327
55°	1882	2132	2374
60°	1809	2150	2455
65°	1727	2173	2544
70°	1635	2240	2685
75°	1458	2336	2934
80°	1244	2474	2998
85°	886	2452	2868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.9	3.1
10°-20°	454.4	8.9
20°-30°	686.4	13.5
30°-40°	827.2	16.2
40°-50°	868.5	17.1
50°-60°	812.5	16.0
60°-70°	671.0	13.2
70°-80°	457.2	9.0
80°-90°	155.9	3.1
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°	1299.7	25.5
0°-40°	2127.0	41.8
0°-60°	3807.9	74.8
0°-90°	5092.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5092.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1679	1679	1679	1679	1679	
5°	1676	1674	1666	1676	1676	159
15°	1602	1603	1605	1622	1625	451
25°	1461	1468	1485	1514	1522	672
35°	1270	1284	1318	1362	1375	794
45°	1046	1068	1122	1183	1205	807
55°	802	835	909	983	1012	716
65°	542	588	682	769	799	538
75°	280	345	449	534	564	299
85°	57	113	159	179	186	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1679.3	1679.3	1679.3	1679.3	1679.3
2.5°	1681.0	1679.3	1670.9	1679.3	1677.6
5°	1675.9	1674.2	1665.8	1675.9	1675.9
7.5°	1664.1	1664.1	1655.6	1667.5	1669.2
10°	1647.2	1647.2	1642.1	1655.6	1655.6
12.5°	1626.9	1626.9	1626.9	1640.4	1642.1
15°	1601.6	1603.3	1605.0	1621.9	1625.2
17.5°	1571.2	1574.6	1579.6	1599.9	1603.3
20°	1539.1	1542.5	1550.9	1574.6	1579.6
22.5°	1498.5	1507.0	1518.8	1545.8	1550.9
25°	1461.4	1468.1	1485.0	1513.7	1522.2
27.5°	1415.7	1425.9	1447.8	1478.3	1490.1
30°	1370.1	1380.3	1407.3	1442.8	1452.9
32.5°	1321.1	1336.3	1365.1	1402.2	1414.1
35°	1270.5	1284.0	1317.8	1361.7	1375.2
37.5°	1214.7	1233.3	1270.5	1317.8	1334.7
40°	1160.6	1180.9	1223.2	1273.8	1294.1
42.5°	1106.6	1126.9	1174.2	1231.6	1251.9
45°	1045.8	1067.7	1121.8	1182.6	1204.6
47.5°	984.9	1012.0	1071.1	1135.3	1159.0
50°	922.4	952.8	1017.0	1084.6	1111.6
52.5°	866.7	895.4	963.0	1035.6	1061.0
55°	802.5	834.6	908.9	983.3	1012.0
57.5°	736.6	772.1	851.5	932.6	961.3
60°	672.4	711.3	799.1	880.2	912.3
62.5°	609.9	648.7	740.0	824.4	856.5
65°	542.3	587.9	682.5	768.7	799.1
67.5°	478.1	527.1	626.8	711.3	741.7
70°	415.6	462.9	569.3	652.1	682.5
72.5°	348.0	402.1	508.5	594.7	626.8
75°	280.4	344.6	449.4	533.9	564.3
77.5°	217.9	283.8	388.6	457.8	473.0
80°	160.5	228.1	319.3	368.3	386.9
82.5°	103.1	170.6	243.3	278.8	294.0
85°	57.4	113.2	158.8	179.1	185.8
87.5°	23.7	49.0	64.2	72.6	72.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)