

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: P314060

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-CP250-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: P314060
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: 24FCZ2-55HE-UNV-L83050-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" 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: 4450.0 lumens
Efficiency: N/A
Efficacy: 103.5 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

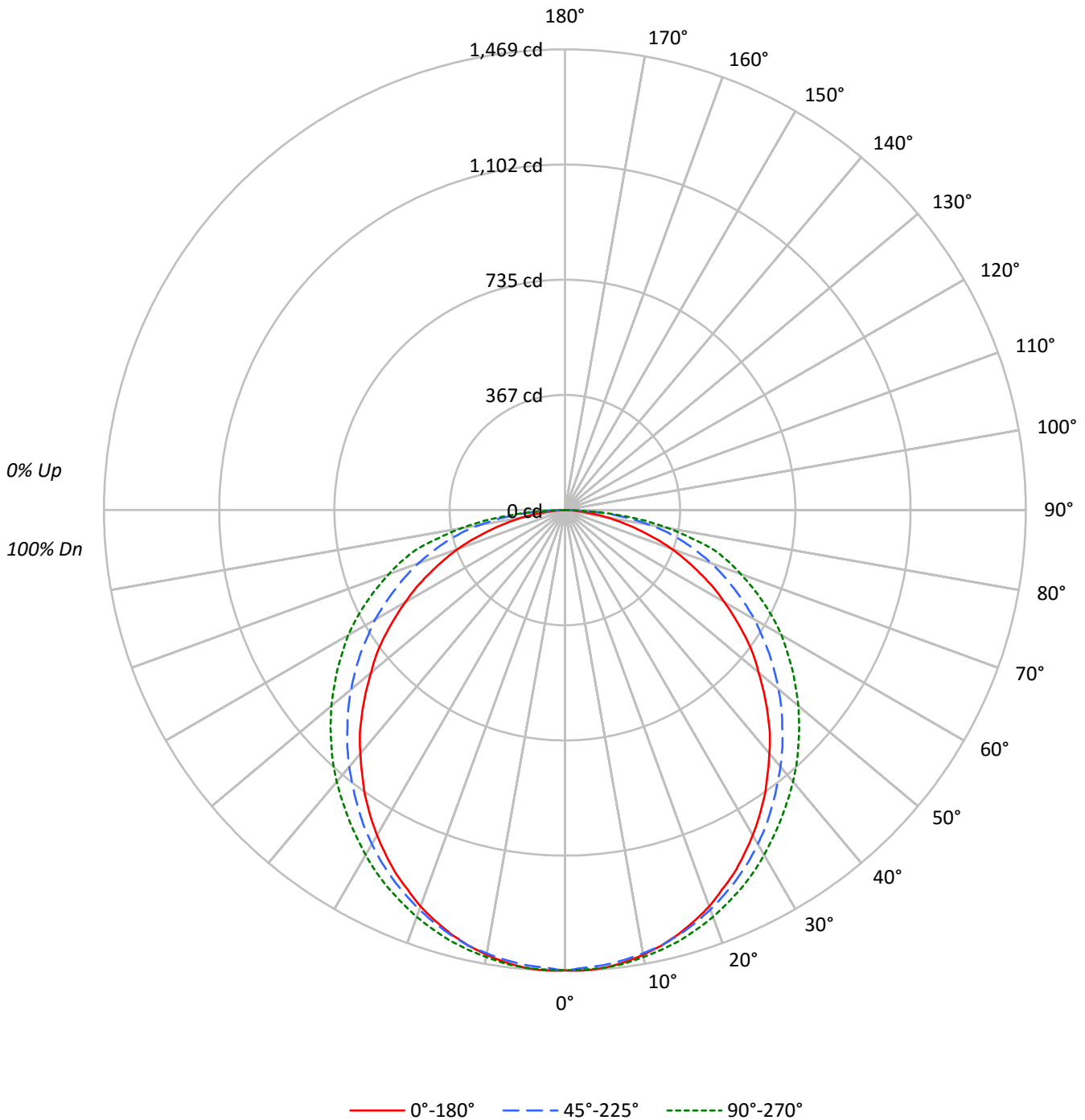
Input Watts (W): 43
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1975	1975	1975
5°	1978	1966	1978
10°	1967	1961	1977
15°	1950	1954	1978
20°	1926	1941	1977
25°	1896	1927	1975
30°	1860	1911	1973
35°	1824	1892	1974
40°	1782	1877	1986
45°	1739	1865	2003
50°	1687	1860	2034
55°	1645	1863	2075
60°	1581	1879	2146
65°	1509	1899	2223
70°	1429	1958	2347
75°	1274	2041	2563
80°	1087	2162	2620
85°	775	2143	2507



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.9	3.1
10°-20°	397.1	8.9
20°-30°	599.8	13.5
30°-40°	722.9	16.2
40°-50°	759.0	17.1
50°-60°	710.1	16.0
60°-70°	586.4	13.2
70°-80°	399.6	9.0
80°-90°	136.3	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°	1135.9	25.5
0°-40°	1858.8	41.8
0°-60°	3327.8	74.8
0°-90°	4450.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4450.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1468	1468	1468	1468	1468	
5°	1465	1463	1456	1465	1465	139
15°	1400	1401	1403	1417	1420	395
25°	1277	1283	1298	1323	1330	588
35°	1110	1122	1152	1190	1202	694
45°	914	933	980	1034	1053	705
55°	701	729	794	859	884	626
65°	474	514	596	672	698	470
75°	245	301	393	467	493	261
85°	50	99	139	156	162	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1467.6	1467.6	1467.6	1467.6	1467.6
2.5°	1469.0	1467.6	1460.2	1467.6	1466.1
5°	1464.6	1463.1	1455.8	1464.6	1464.6
7.5°	1454.3	1454.3	1446.9	1457.2	1458.7
10°	1439.5	1439.5	1435.1	1446.9	1446.9
12.5°	1421.8	1421.8	1421.8	1433.6	1435.1
15°	1399.7	1401.1	1402.6	1417.4	1420.3
17.5°	1373.1	1376.0	1380.5	1398.2	1401.1
20°	1345.0	1348.0	1355.4	1376.0	1380.5
22.5°	1309.6	1317.0	1327.3	1350.9	1355.4
25°	1277.1	1283.0	1297.8	1322.9	1330.3
27.5°	1237.2	1246.1	1265.3	1291.9	1302.2
30°	1197.4	1206.2	1229.9	1260.9	1269.7
32.5°	1154.6	1167.9	1193.0	1225.4	1235.8
35°	1110.3	1122.1	1151.6	1190.0	1201.8
37.5°	1061.6	1077.8	1110.3	1151.6	1166.4
40°	1014.3	1032.0	1068.9	1113.2	1130.9
42.5°	967.1	984.8	1026.1	1076.3	1094.0
45°	913.9	933.1	980.3	1033.5	1052.7
47.5°	860.8	884.4	936.1	992.2	1012.8
50°	806.1	832.7	888.8	947.9	971.5
52.5°	757.4	782.5	841.6	905.1	927.2
55°	701.3	729.4	794.3	859.3	884.4
57.5°	643.7	674.7	744.1	815.0	840.1
60°	587.6	621.6	698.4	769.2	797.3
62.5°	533.0	566.9	646.7	720.5	748.5
65°	473.9	513.8	596.5	671.8	698.4
67.5°	417.8	460.6	547.8	621.6	648.2
70°	363.2	404.5	497.6	569.9	596.5
72.5°	304.1	351.4	444.4	519.7	547.8
75°	245.1	301.2	392.7	466.6	493.1
77.5°	190.5	248.0	339.6	400.1	413.4
80°	140.3	199.3	279.0	321.9	338.1
82.5°	90.1	149.1	212.6	243.6	256.9
85°	50.2	98.9	138.8	156.5	162.4
87.5°	20.7	42.8	56.1	63.5	63.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)