

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: P314216

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-S-CA08-W2A-U-3500K**

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: P314216
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: 24FCZ2-35HE-UNV-L83050-S-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 3500K 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: 3381.0 lumens
Efficiency: N/A
Efficacy: 130.0 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

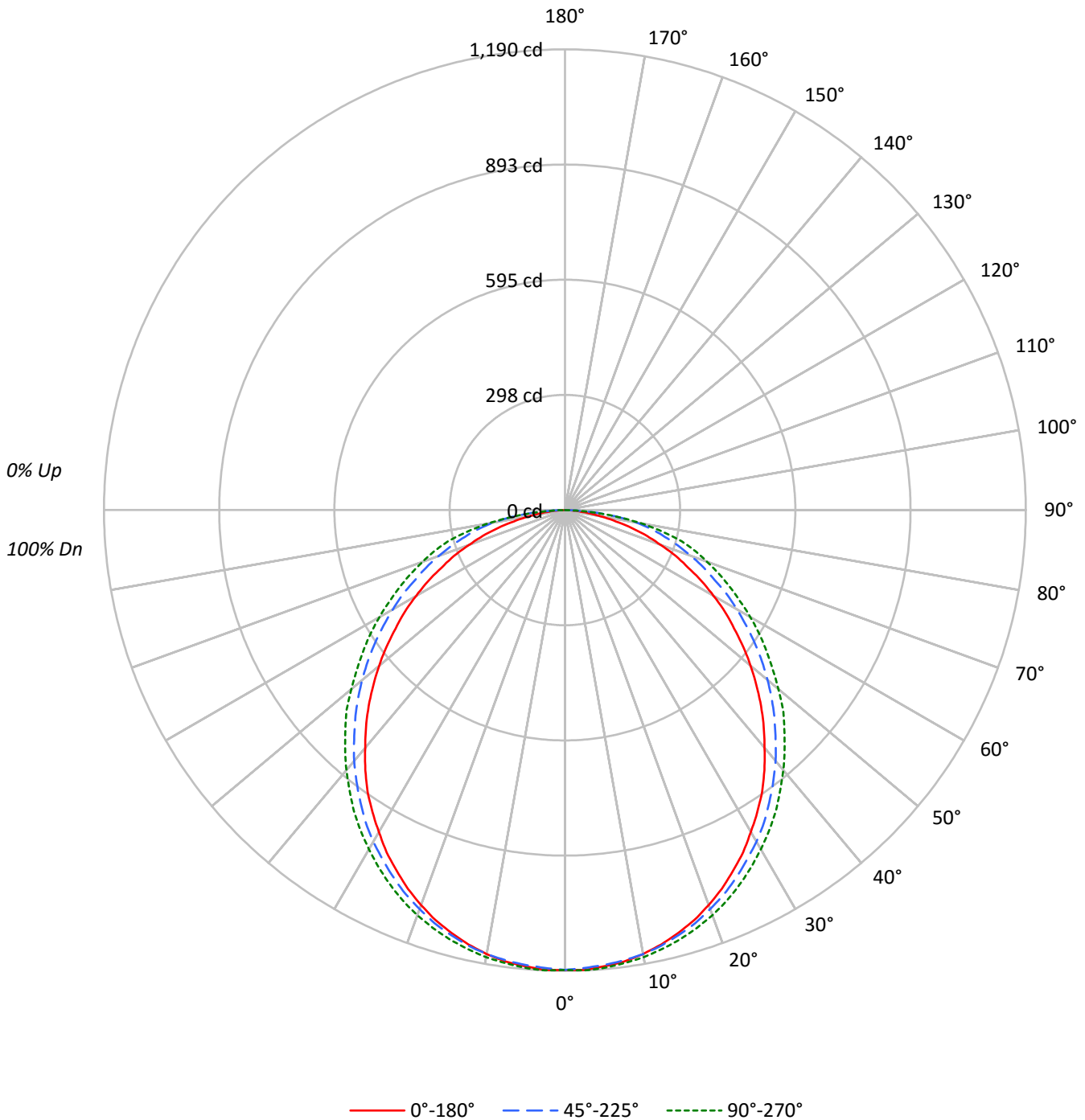
Input Watts (W): 26
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1598	1598	1598
5°	1597	1593	1603
10°	1590	1590	1602
15°	1575	1583	1599
20°	1555	1570	1595
25°	1526	1555	1585
30°	1492	1537	1572
35°	1459	1512	1559
40°	1409	1486	1541
45°	1363	1457	1525
50°	1311	1430	1506
55°	1252	1403	1491
60°	1193	1381	1488
65°	1118	1358	1498
70°	1035	1365	1538
75°	927	1390	1625
80°	749	1473	1589
85°	563	1294	1260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.4	3.3
10°-20°	321.3	9.5
20°-30°	483.0	14.3
30°-40°	575.3	17.0
40°-50°	588.8	17.4
50°-60°	530.1	15.7
60°-70°	416.3	12.3
70°-80°	270.2	8.0
80°-90°	83.6	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°	916.7	27.1
0°-40°	1492.0	44.1
0°-60°	2610.9	77.2
0°-90°	3381.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3381.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1182	1184	1179	1186	1187	112
15°	1131	1134	1136	1146	1148	319
25°	1028	1036	1047	1064	1068	473
35°	888	899	920	943	949	554
45°	716	734	766	795	801	552
55°	534	557	598	629	636	478
65°	351	378	426	462	470	350
75°	178	213	267	304	312	189
85°	36	68	84	82	82	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1187.8	1187.8	1187.8	1187.8	1187.8
2.5°	1188.8	1188.8	1183.5	1188.8	1189.9
5°	1182.4	1184.5	1179.2	1185.6	1186.7
7.5°	1176.0	1176.0	1172.7	1179.2	1180.2
10°	1164.1	1165.2	1164.1	1171.7	1172.7
12.5°	1149.1	1151.3	1152.3	1159.8	1160.9
15°	1130.8	1134.1	1136.2	1145.9	1148.0
17.5°	1110.4	1113.7	1119.0	1129.8	1131.9
20°	1085.7	1090.0	1096.5	1110.4	1113.7
22.5°	1058.9	1063.2	1073.9	1086.8	1092.2
25°	1027.8	1036.3	1047.1	1064.3	1067.5
27.5°	996.6	1004.1	1018.1	1036.3	1040.6
30°	960.1	971.9	989.1	1007.3	1011.6
32.5°	924.7	936.5	956.9	976.2	981.6
35°	888.1	898.9	920.4	942.9	949.4
37.5°	846.3	860.2	883.8	906.4	912.8
40°	802.2	819.4	846.3	869.9	877.4
42.5°	760.3	778.6	805.4	831.2	839.8
45°	716.3	733.5	765.7	794.7	801.2
47.5°	671.2	690.5	724.9	753.9	764.6
50°	626.1	646.5	683.0	713.1	719.5
52.5°	581.0	602.5	641.1	673.4	676.6
55°	533.7	557.4	598.2	629.3	635.8
57.5°	490.8	511.2	555.2	587.4	595.0
60°	443.5	466.1	513.3	543.4	553.1
62.5°	398.4	422.1	471.5	501.5	510.1
65°	351.2	378.0	426.4	461.8	470.4
67.5°	310.4	336.1	387.7	422.1	430.6
70°	263.1	292.1	346.9	382.3	390.9
72.5°	222.3	252.4	307.1	341.5	354.4
75°	178.3	212.6	267.4	303.9	312.5
77.5°	135.3	175.1	230.9	258.8	258.8
80°	96.7	138.5	190.1	203.0	205.1
82.5°	63.4	104.2	140.7	139.6	139.6
85°	36.5	67.7	83.8	81.6	81.6
87.5°	14.0	27.9	30.1	30.1	29.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)