

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: P314240

Luminaire Tested: **24FCZ2-35-UNV-L83050-S-CA08-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: P314240
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: 24FCZ2-35-UNV-L83050-S-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 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: 3229.0 lumens
Efficiency: N/A
Efficacy: 115.7 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

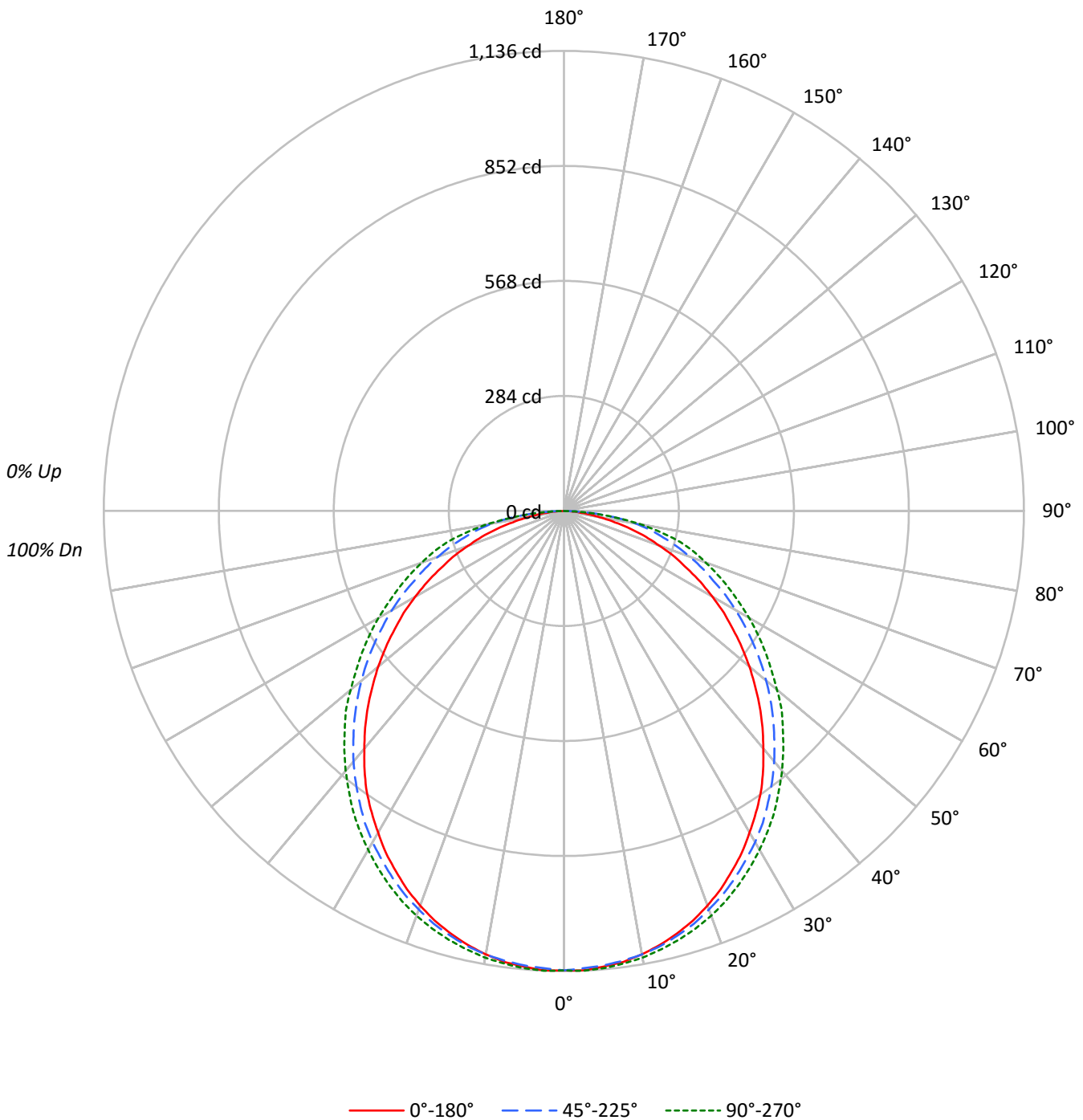
Input Watts (W): 27.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1526	1526	1526
5°	1525	1521	1531
10°	1519	1519	1530
15°	1504	1511	1527
20°	1485	1499	1523
25°	1457	1485	1514
30°	1425	1468	1501
35°	1393	1444	1489
40°	1346	1420	1472
45°	1302	1392	1456
50°	1252	1365	1438
55°	1196	1340	1424
60°	1140	1319	1421
65°	1068	1296	1430
70°	989	1303	1469
75°	885	1328	1552
80°	715	1406	1518
85°	539	1235	1203



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.4	3.3
10°-20°	306.9	9.5
20°-30°	461.3	14.3
30°-40°	549.5	17.0
40°-50°	562.3	17.4
50°-60°	506.3	15.7
60°-70°	397.6	12.3
70°-80°	258.0	8.0
80°-90°	79.8	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°	875.5	27.1
0°-40°	1425.0	44.1
0°-60°	2493.6	77.2
0°-90°	3229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3229.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1134	1134	1134	1134	1134	
5°	1129	1131	1126	1132	1133	107
15°	1080	1083	1085	1094	1096	305
25°	982	990	1000	1016	1020	452
35°	848	858	879	900	907	529
45°	684	700	731	759	765	527
55°	510	532	571	601	607	457
65°	335	361	407	441	449	334
75°	170	203	255	290	298	180
85°	35	65	80	78	78	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1134.4	1134.4	1134.4	1134.4	1134.4
2.5°	1135.4	1135.4	1130.3	1135.4	1136.4
5°	1129.2	1131.3	1126.2	1132.3	1133.3
7.5°	1123.1	1123.1	1120.0	1126.2	1127.2
10°	1111.8	1112.8	1111.8	1119.0	1120.0
12.5°	1097.4	1099.5	1100.5	1107.7	1108.7
15°	1080.0	1083.1	1085.1	1094.4	1096.4
17.5°	1060.5	1063.6	1068.7	1079.0	1081.0
20°	1036.9	1041.0	1047.2	1060.5	1063.6
22.5°	1011.3	1015.4	1025.6	1038.0	1043.1
25°	981.5	989.8	1000.0	1016.4	1019.5
27.5°	951.8	959.0	972.3	989.8	993.9
30°	916.9	928.2	944.6	962.1	966.2
32.5°	883.1	894.4	913.9	932.3	937.4
35°	848.2	858.5	879.0	900.5	906.7
37.5°	808.2	821.5	844.1	865.6	871.8
40°	766.2	782.6	808.2	830.8	838.0
42.5°	726.2	743.6	769.2	793.9	802.1
45°	684.1	700.5	731.3	759.0	765.1
47.5°	641.0	659.5	692.3	720.0	730.3
50°	598.0	617.4	652.3	681.0	687.2
52.5°	554.9	575.4	612.3	643.1	646.2
55°	509.7	532.3	571.3	601.0	607.2
57.5°	468.7	488.2	530.3	561.0	568.2
60°	423.6	445.1	490.3	519.0	528.2
62.5°	380.5	403.1	450.3	479.0	487.2
65°	335.4	361.0	407.2	441.0	449.2
67.5°	296.4	321.0	370.3	403.1	411.3
70°	251.3	279.0	331.3	365.1	373.3
72.5°	212.3	241.0	293.3	326.2	338.5
75°	170.3	203.1	255.4	290.3	298.5
77.5°	129.2	167.2	220.5	247.2	247.2
80°	92.3	132.3	181.5	193.8	195.9
82.5°	60.5	99.5	134.4	133.3	133.3
85°	34.9	64.6	80.0	77.9	77.9
87.5°	13.3	26.7	28.7	28.7	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)