

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: P310584

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-CA08-W2A-U-4500K**

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: P310584
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: 24FCZ2-35HE-UNV-L82765-CA08-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 4500K 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: 3269.0 lumens
Efficiency: N/A
Efficacy: 123.4 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

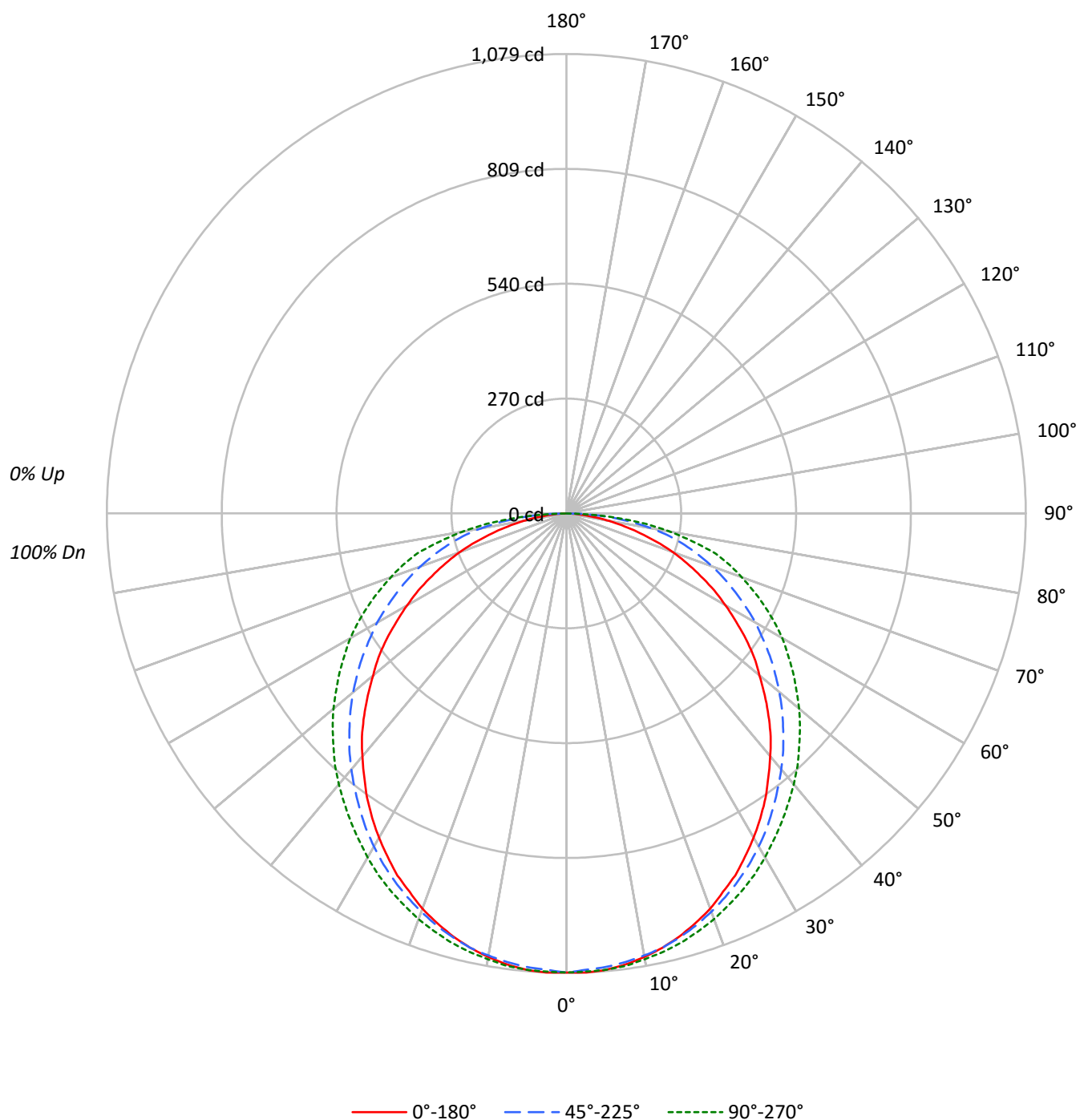
Input Watts (W): 26.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1451	1451	1451
5°	1453	1444	1453
10°	1445	1440	1452
15°	1432	1435	1453
20°	1415	1426	1452
25°	1393	1415	1451
30°	1367	1404	1449
35°	1340	1390	1450
40°	1309	1379	1459
45°	1278	1370	1471
50°	1240	1367	1494
55°	1209	1369	1524
60°	1162	1380	1576
65°	1109	1395	1633
70°	1050	1438	1724
75°	936	1500	1883
80°	798	1588	1925
85°	570	1575	1842



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	3.1
10°-20°	291.7	8.9
20°-30°	440.6	13.5
30°-40°	531.1	16.2
40°-50°	557.5	17.1
50°-60°	521.6	16.0
60°-70°	430.8	13.2
70°-80°	293.5	9.0
80°-90°	100.1	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°	834.4	25.5
0°-40°	1365.5	41.8
0°-60°	2444.6	74.8
0°-90°	3269.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3269.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1078	1078	1078	1078	1078	
5°	1076	1075	1069	1076	1076	102
15°	1028	1029	1030	1041	1043	290
25°	938	942	953	972	977	432
35°	816	824	846	874	883	510
45°	671	686	720	759	773	518
55°	515	536	584	631	650	460
65°	348	377	438	494	513	345
75°	180	221	288	343	362	192
85°	37	73	102	115	119	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1078.1	1078.1	1078.1	1078.1	1078.1
2.5°	1079.2	1078.1	1072.7	1078.1	1077.0
5°	1075.9	1074.8	1069.4	1075.9	1075.9
7.5°	1068.3	1068.3	1062.9	1070.5	1071.6
10°	1057.5	1057.5	1054.2	1062.9	1062.9
12.5°	1044.5	1044.5	1044.5	1053.1	1054.2
15°	1028.2	1029.3	1030.4	1041.2	1043.4
17.5°	1008.7	1010.8	1014.1	1027.1	1029.3
20°	988.1	990.2	995.7	1010.8	1014.1
22.5°	962.0	967.5	975.1	992.4	995.7
25°	938.2	942.5	953.4	971.8	977.2
27.5°	908.9	915.4	929.5	949.0	956.6
30°	879.6	886.1	903.5	926.2	932.8
32.5°	848.2	857.9	876.4	900.2	907.8
35°	815.6	824.3	846.0	874.2	882.9
37.5°	779.8	791.8	815.6	846.0	856.8
40°	745.1	758.1	785.2	817.8	830.8
42.5°	710.4	723.4	753.8	790.7	803.7
45°	671.4	685.5	720.2	759.2	773.3
47.5°	632.3	649.7	687.6	728.8	744.0
50°	592.2	611.7	652.9	696.3	713.7
52.5°	556.4	574.8	618.2	664.9	681.1
55°	515.2	535.8	583.5	631.2	649.7
57.5°	472.9	495.7	546.6	598.7	617.1
60°	431.7	456.6	513.0	565.1	585.7
62.5°	391.5	416.5	475.1	529.3	549.9
65°	348.2	377.4	438.2	493.5	513.0
67.5°	306.9	338.4	402.4	456.6	476.1
70°	266.8	297.2	365.5	418.7	438.2
72.5°	223.4	258.1	326.5	381.8	402.4
75°	180.0	221.3	288.5	342.7	362.3
77.5°	139.9	182.2	249.5	293.9	303.7
80°	103.0	146.4	205.0	236.4	248.4
82.5°	66.2	109.5	156.2	179.0	188.7
85°	36.9	72.7	102.0	115.0	119.3
87.5°	15.2	31.5	41.2	46.6	46.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)