

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: P311263

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-S-CA08-W2A-U-6500K**

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: P311263
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-L82765-S-CA08-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 6500K 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: 3533.0 lumens
Efficiency: N/A
Efficacy: 129.9 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

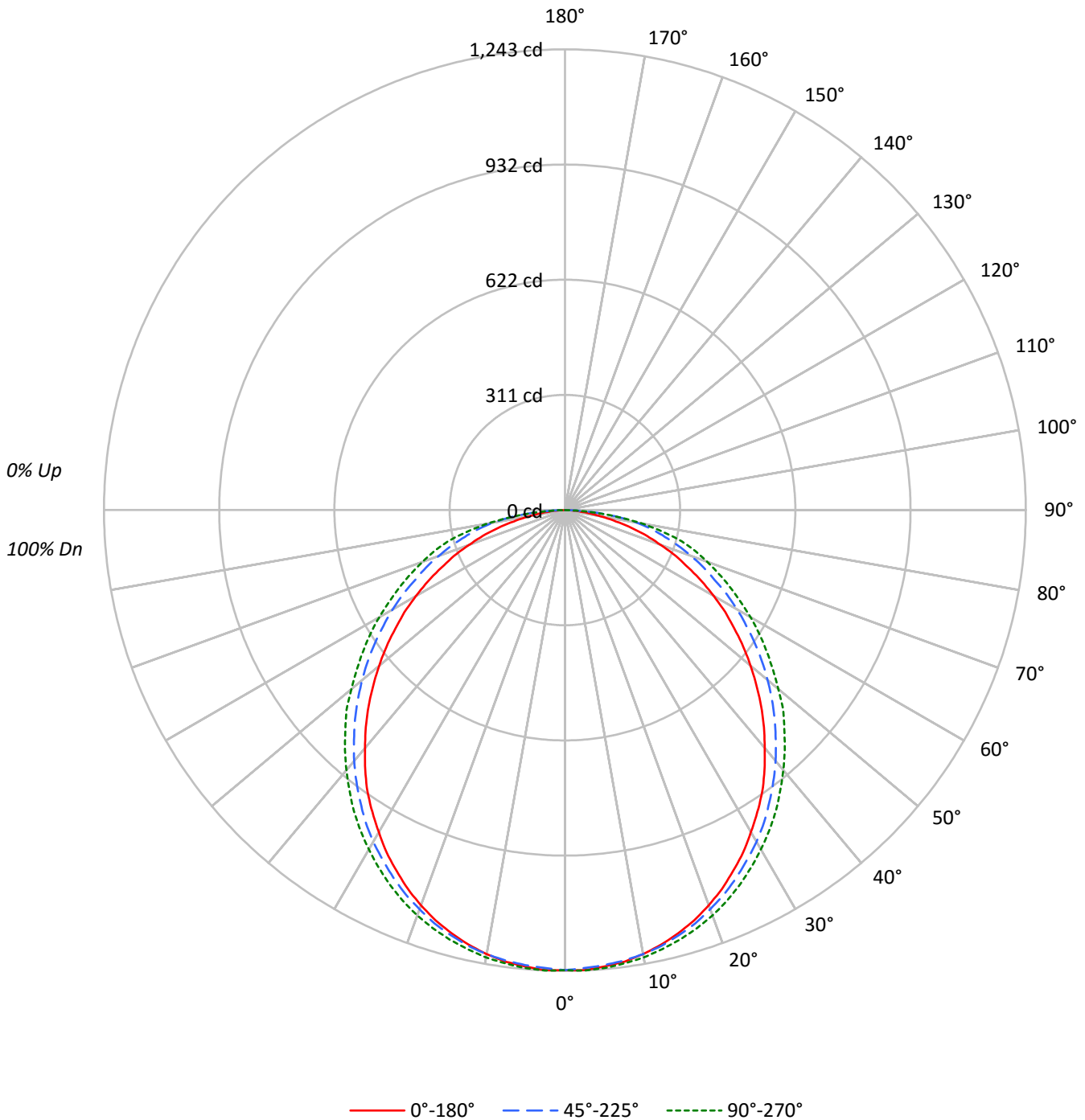
Input Watts (W): 27.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1670	1670	1670
5°	1669	1664	1675
10°	1662	1662	1674
15°	1646	1654	1671
20°	1625	1641	1666
25°	1594	1624	1656
30°	1559	1606	1642
35°	1524	1580	1629
40°	1472	1553	1610
45°	1424	1522	1593
50°	1369	1494	1574
55°	1308	1466	1558
60°	1247	1443	1555
65°	1168	1418	1565
70°	1081	1426	1607
75°	968	1452	1698
80°	783	1539	1660
85°	590	1351	1317



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.5	3.3
10°-20°	335.7	9.5
20°-30°	504.7	14.3
30°-40°	601.2	17.0
40°-50°	615.3	17.4
50°-60°	553.9	15.7
60°-70°	435.0	12.3
70°-80°	282.3	8.0
80°-90°	87.3	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°	958.0	27.1
0°-40°	1559.1	44.1
0°-60°	2728.3	77.2
0°-90°	3533.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3533.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1241	1241	1241	1241	1241	
5°	1236	1238	1232	1239	1240	117
15°	1182	1185	1187	1197	1200	333
25°	1074	1083	1094	1112	1116	495
35°	928	939	962	985	992	579
45°	748	766	800	830	837	577
55°	558	582	625	658	664	500
65°	367	395	446	483	492	365
75°	186	222	279	318	327	197
85°	38	71	88	85	85	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1241.2	1241.2	1241.2	1241.2	1241.2
2.5°	1242.3	1242.3	1236.7	1242.3	1243.4
5°	1235.6	1237.8	1232.2	1238.9	1240.0
7.5°	1228.8	1228.8	1225.5	1232.2	1233.3
10°	1216.5	1217.6	1216.5	1224.3	1225.5
12.5°	1200.8	1203.0	1204.1	1212.0	1213.1
15°	1181.7	1185.1	1187.3	1197.4	1199.6
17.5°	1160.4	1163.7	1169.3	1180.6	1182.8
20°	1134.6	1139.0	1145.8	1160.4	1163.7
22.5°	1106.5	1111.0	1122.2	1135.7	1141.3
25°	1074.0	1082.9	1094.2	1112.1	1115.5
27.5°	1041.4	1049.3	1063.9	1082.9	1087.4
30°	1003.3	1015.6	1033.6	1052.6	1057.1
32.5°	966.2	978.6	999.9	1020.1	1025.7
35°	928.1	939.3	961.7	985.3	992.0
37.5°	884.3	898.9	923.6	947.1	953.9
40°	838.3	856.2	884.3	909.0	916.8
42.5°	794.5	813.6	841.7	868.6	877.6
45°	748.5	766.5	800.1	830.4	837.2
47.5°	701.4	721.6	757.5	787.8	799.0
50°	654.2	675.6	713.7	745.1	751.9
52.5°	607.1	629.6	670.0	703.6	707.0
55°	557.7	582.4	625.1	657.6	664.3
57.5°	512.9	534.2	580.2	613.8	621.7
60°	463.5	487.0	536.4	567.8	577.9
62.5°	416.3	441.0	492.7	524.1	533.1
65°	367.0	395.0	445.5	482.6	491.5
67.5°	324.3	351.3	405.1	441.0	450.0
70°	274.9	305.2	362.5	399.5	408.5
72.5°	232.3	263.7	321.0	356.9	370.3
75°	186.3	222.2	279.4	317.6	326.6
77.5°	141.4	182.9	241.3	270.5	270.5
80°	101.0	144.8	198.6	212.1	214.3
82.5°	66.2	108.9	147.0	145.9	145.9
85°	38.2	70.7	87.5	85.3	85.3
87.5°	14.6	29.2	31.4	31.4	30.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)