

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: P310357

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-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: P310357
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-65HE-UNV-L82765-RDP-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 3926.0 lumens
Efficiency: N/A
Efficacy: 74.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

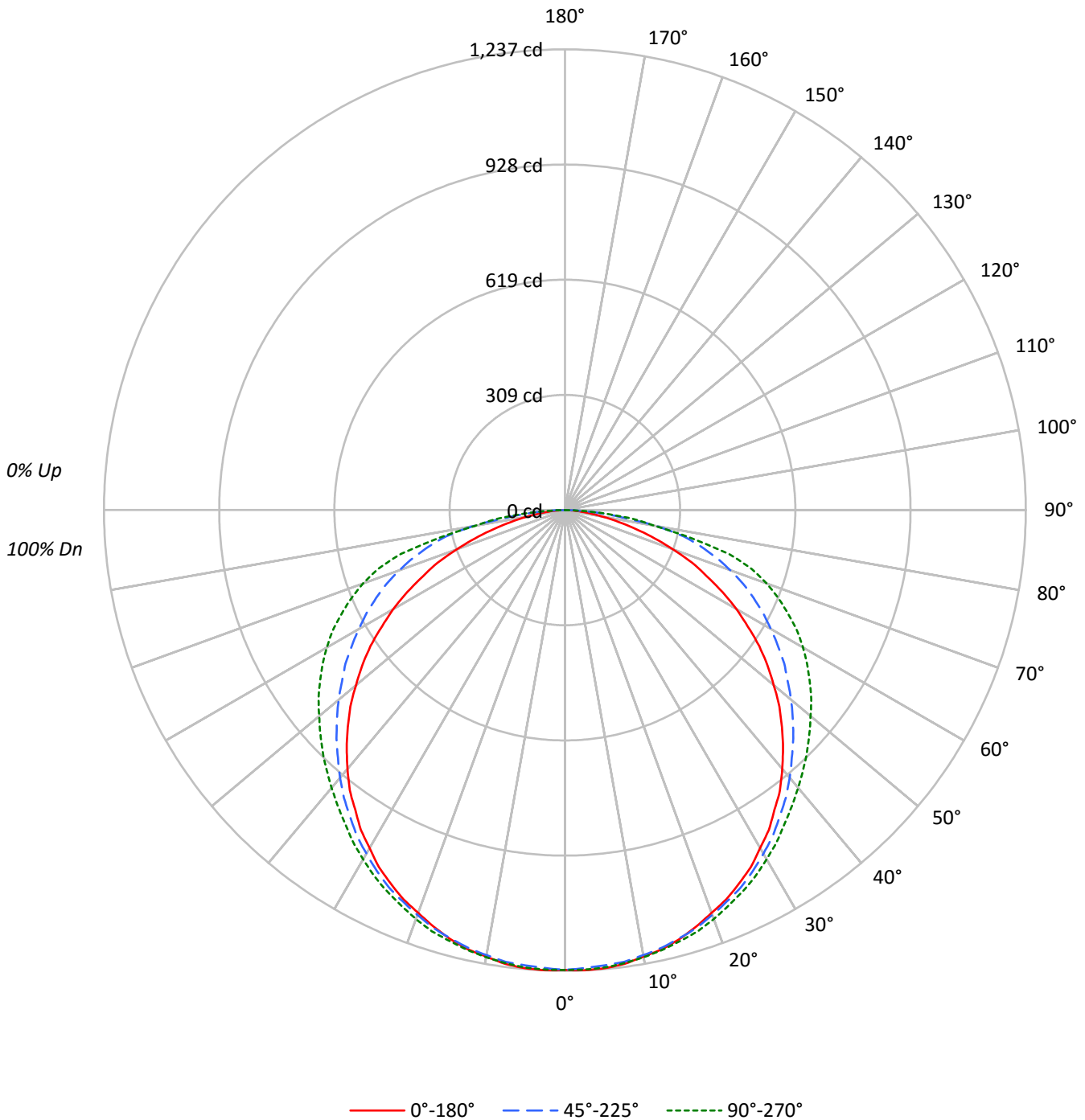
Input Watts (W): 52.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1661	1661	1661
5°	1667	1657	1665
10°	1663	1658	1665
15°	1660	1657	1668
20°	1648	1656	1673
25°	1642	1659	1677
30°	1628	1655	1682
35°	1612	1650	1689
40°	1594	1649	1710
45°	1567	1649	1749
50°	1533	1659	1802
55°	1494	1686	1882
60°	1431	1719	1986
65°	1339	1779	2108
70°	1218	1862	2268
75°	1032	1964	2369
80°	815	1977	1916
85°	601	1504	1684



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.1	3.0
10°-20°	337.1	8.6
20°-30°	515.4	13.1
30°-40°	630.1	16.0
40°-50°	671.6	17.1
50°-60°	642.1	16.4
60°-70°	543.9	13.9
70°-80°	365.6	9.3
80°-90°	103.1	2.6
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°	969.6	24.7
0°-40°	1599.7	40.7
0°-60°	2913.4	74.2
0°-90°	3926.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3926.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1235	1235	1235	1235	1235	
5°	1235	1233	1227	1233	1233	117
15°	1192	1192	1190	1200	1198	336
25°	1106	1110	1118	1128	1130	510
35°	982	989	1005	1024	1028	615
45°	824	837	867	904	919	635
55°	637	660	719	775	802	567
65°	421	464	559	633	662	418
75°	199	271	378	442	456	213
85°	39	80	97	105	109	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1234.6	1234.6	1234.6	1234.6	1234.6
2.5°	1236.6	1236.6	1230.7	1234.6	1234.6
5°	1234.6	1232.7	1226.8	1232.7	1232.7
7.5°	1228.8	1226.8	1222.9	1228.8	1226.8
10°	1217.1	1217.1	1213.2	1219.0	1219.0
12.5°	1207.4	1205.4	1203.5	1211.2	1209.3
15°	1191.8	1191.8	1189.8	1199.6	1197.6
17.5°	1172.3	1174.2	1176.2	1184.0	1185.9
20°	1150.9	1154.8	1156.7	1168.4	1168.4
22.5°	1131.4	1133.4	1137.2	1148.9	1148.9
25°	1106.1	1110.0	1117.8	1127.5	1129.5
27.5°	1080.8	1082.7	1092.5	1106.1	1108.0
30°	1047.7	1053.5	1065.2	1080.8	1082.7
32.5°	1018.5	1024.3	1037.9	1053.5	1057.4
35°	981.5	989.2	1004.8	1024.3	1028.2
37.5°	948.4	954.2	973.7	995.1	1000.9
40°	907.5	919.1	938.6	963.9	973.7
42.5°	866.6	878.3	901.6	934.7	946.4
45°	823.7	837.4	866.6	903.6	919.1
47.5°	780.9	796.5	829.6	872.4	889.9
50°	732.2	751.7	792.6	841.3	860.7
52.5°	685.5	708.8	753.6	808.1	833.5
55°	636.8	660.1	718.6	775.0	802.3
57.5°	582.3	613.4	677.7	741.9	771.1
60°	531.6	560.8	638.7	708.8	738.0
62.5°	477.1	516.0	599.8	673.8	703.0
65°	420.6	463.5	558.9	632.9	662.1
67.5°	370.0	416.7	518.0	592.0	621.2
70°	309.6	368.0	473.2	547.2	576.4
72.5°	253.2	317.4	426.5	498.5	525.8
75°	198.6	270.7	377.8	442.0	455.7
77.5°	148.0	223.9	327.2	354.4	344.7
80°	105.2	179.2	255.1	241.5	247.3
82.5°	68.2	136.3	157.7	179.2	185.0
85°	38.9	79.8	97.4	105.2	109.1
87.5°	17.5	29.2	38.9	38.9	37.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)