

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: P313736

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-RDP-CP250-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: P313736
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-L83050-RDP-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB 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: 3730.0 lumens
Efficiency: N/A
Efficacy: 70.9 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

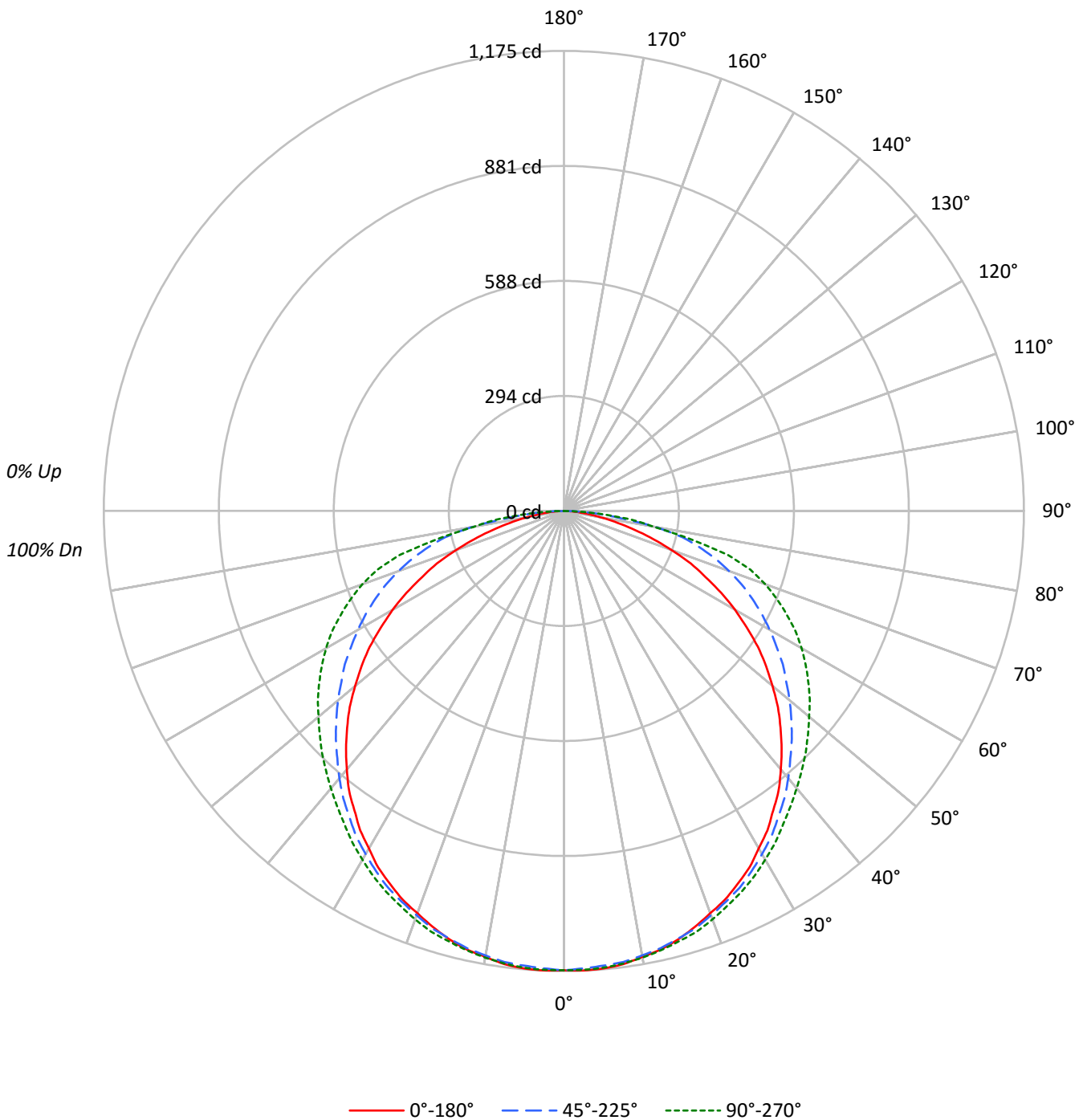
Input Watts (W): 52.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1578	1578	1578
5°	1584	1574	1582
10°	1580	1575	1582
15°	1577	1575	1585
20°	1566	1574	1589
25°	1560	1577	1593
30°	1546	1572	1598
35°	1532	1568	1605
40°	1514	1566	1625
45°	1489	1567	1662
50°	1456	1576	1712
55°	1419	1601	1788
60°	1359	1633	1887
65°	1272	1691	2003
70°	1157	1769	2154
75°	981	1866	2250
80°	774	1878	1821
85°	571	1428	1599



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.3	3.0
10°-20°	320.2	8.6
20°-30°	489.7	13.1
30°-40°	598.7	16.0
40°-50°	638.0	17.1
50°-60°	610.0	16.4
60°-70°	516.8	13.9
70°-80°	347.3	9.3
80°-90°	98.0	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°	921.2	24.7
0°-40°	1519.9	40.7
0°-60°	2767.9	74.2
0°-90°	3730.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3730.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1173	1173	1173	1173	1173	
5°	1173	1171	1166	1171	1171	111
15°	1132	1132	1130	1140	1138	319
25°	1051	1055	1062	1071	1073	484
35°	932	940	955	973	977	584
45°	783	796	823	858	873	604
55°	605	627	683	736	762	539
65°	400	440	531	601	629	397
75°	189	257	359	420	433	202
85°	37	76	92	100	104	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1173.0	1173.0	1173.0	1173.0	1173.0
2.5°	1174.8	1174.8	1169.3	1173.0	1173.0
5°	1173.0	1171.1	1165.6	1171.1	1171.1
7.5°	1167.4	1165.6	1161.9	1167.4	1165.6
10°	1156.3	1156.3	1152.6	1158.2	1158.2
12.5°	1147.1	1145.2	1143.4	1150.8	1148.9
15°	1132.3	1132.3	1130.4	1139.7	1137.8
17.5°	1113.8	1115.6	1117.5	1124.9	1126.7
20°	1093.4	1097.1	1099.0	1110.1	1110.1
22.5°	1074.9	1076.8	1080.5	1091.6	1091.6
25°	1050.9	1054.6	1062.0	1071.2	1073.1
27.5°	1026.8	1028.7	1037.9	1050.9	1052.7
30°	995.4	1000.9	1012.0	1026.8	1028.7
32.5°	967.6	973.2	986.1	1000.9	1004.6
35°	932.5	939.9	954.7	973.2	976.9
37.5°	901.0	906.6	925.1	945.4	951.0
40°	862.2	873.3	891.8	915.8	925.1
42.5°	823.3	834.4	856.6	888.1	899.2
45°	782.6	795.6	823.3	858.5	873.3
47.5°	741.9	756.7	788.2	828.9	845.5
50°	695.6	714.1	753.0	799.3	817.8
52.5°	651.2	673.4	716.0	767.8	791.9
55°	605.0	627.2	682.7	736.3	762.3
57.5°	553.2	582.8	643.8	704.9	732.6
60°	505.1	532.8	606.8	673.4	701.2
62.5°	453.3	490.3	569.8	640.1	667.9
65°	399.6	440.3	531.0	601.3	629.0
67.5°	351.5	395.9	492.1	562.4	590.2
70°	294.2	349.7	449.6	519.9	547.6
72.5°	240.5	301.6	405.2	473.6	499.5
75°	188.7	257.2	358.9	420.0	432.9
77.5°	140.6	212.8	310.8	336.7	327.5
80°	99.9	170.2	242.4	229.4	235.0
82.5°	64.8	129.5	149.9	170.2	175.8
85°	37.0	75.9	92.5	99.9	103.6
87.5°	16.7	27.8	37.0	37.0	35.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)