

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: P310325

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CA125-W2A-U-5500K**

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: P310325
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: 24FCZ2-60HE-UNV-L82765-RDP-CA125-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 5500K 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: 3843.0 lumens
Efficiency: N/A
Efficacy: 78.6 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

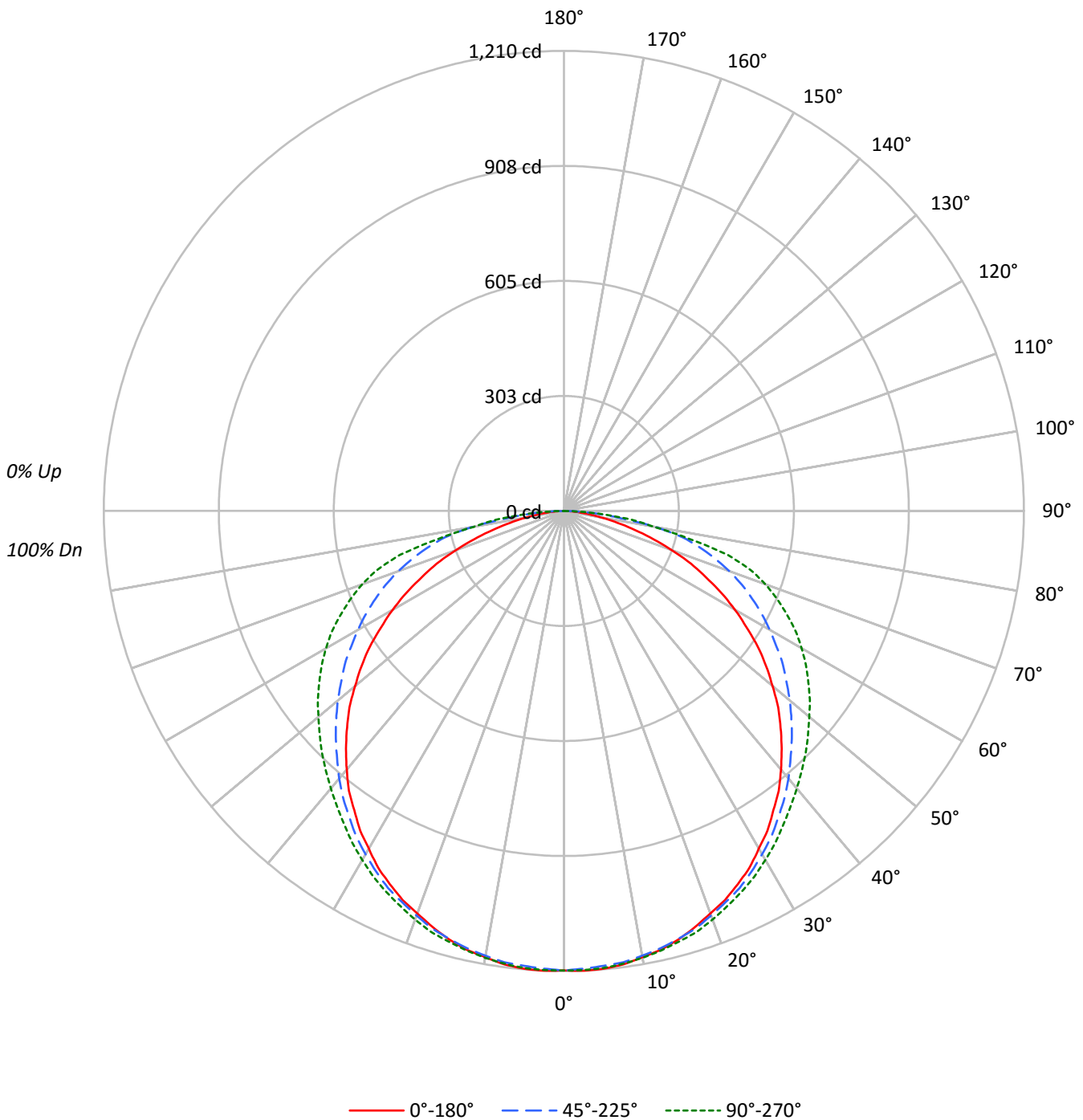
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1626	1626	1626
5°	1632	1622	1630
10°	1628	1622	1630
15°	1625	1622	1633
20°	1613	1621	1638
25°	1607	1624	1641
30°	1593	1620	1647
35°	1578	1616	1653
40°	1560	1614	1674
45°	1534	1614	1712
50°	1500	1624	1764
55°	1462	1650	1842
60°	1400	1682	1944
65°	1311	1742	2063
70°	1192	1822	2220
75°	1011	1922	2319
80°	797	1935	1876
85°	588	1471	1647



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.6	3.0
10°-20°	329.9	8.6
20°-30°	504.5	13.1
30°-40°	616.8	16.0
40°-50°	657.4	17.1
50°-60°	628.5	16.4
60°-70°	532.4	13.9
70°-80°	357.8	9.3
80°-90°	100.9	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°	949.1	24.7
0°-40°	1565.9	40.7
0°-60°	2851.8	74.2
0°-90°	3843.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3843.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1208	1208	1208	1208	1208	
5°	1208	1207	1201	1207	1207	115
15°	1167	1167	1165	1174	1172	329
25°	1083	1086	1094	1104	1106	499
35°	961	968	984	1003	1006	602
45°	806	820	848	884	900	622
55°	623	646	703	759	785	555
65°	412	454	547	620	648	409
75°	194	265	370	433	446	208
85°	38	78	95	103	107	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1208.5	1208.5	1208.5	1208.5	1208.5
2.5°	1210.4	1210.4	1204.7	1208.5	1208.5
5°	1208.5	1206.6	1200.9	1206.6	1206.6
7.5°	1202.8	1200.9	1197.1	1202.8	1200.9
10°	1191.4	1191.4	1187.5	1193.3	1193.3
12.5°	1181.8	1179.9	1178.0	1185.6	1183.7
15°	1166.6	1166.6	1164.7	1174.2	1172.3
17.5°	1147.5	1149.4	1151.3	1159.0	1160.9
20°	1126.5	1130.4	1132.3	1143.7	1143.7
22.5°	1107.5	1109.4	1113.2	1124.6	1124.6
25°	1082.7	1086.5	1094.1	1103.7	1105.6
27.5°	1057.9	1059.8	1069.4	1082.7	1084.6
30°	1025.5	1031.2	1042.7	1057.9	1059.8
32.5°	996.9	1002.6	1016.0	1031.2	1035.1
35°	960.7	968.3	983.6	1002.6	1006.5
37.5°	928.3	934.0	953.1	974.1	979.8
40°	888.3	899.7	918.8	943.6	953.1
42.5°	848.2	859.7	882.6	915.0	926.4
45°	806.3	819.7	848.2	884.5	899.7
47.5°	764.4	779.6	812.0	854.0	871.1
50°	716.7	735.8	775.8	823.5	842.5
52.5°	671.0	693.8	737.7	791.1	815.8
55°	623.3	646.2	703.4	758.7	785.3
57.5°	569.9	600.4	663.3	726.3	754.8
60°	520.4	549.0	625.2	693.8	722.4
62.5°	467.0	505.1	587.1	659.5	688.1
65°	411.7	453.7	547.1	619.5	648.1
67.5°	362.2	407.9	507.0	579.5	608.1
70°	303.1	360.3	463.2	535.6	564.2
72.5°	247.8	310.7	417.5	488.0	514.7
75°	194.4	265.0	369.8	432.7	446.0
77.5°	144.9	219.2	320.2	346.9	337.4
80°	102.9	175.4	249.7	236.4	242.1
82.5°	66.7	133.4	154.4	175.4	181.1
85°	38.1	78.2	95.3	102.9	106.7
87.5°	17.2	28.6	38.1	38.1	36.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)