

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: P310333

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CP125-W2A-U-5000K**

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: P310333  
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-CP125-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET  
Light Source: (336) 5000K 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: 3732.0 lumens  
Efficiency: N/A  
Efficacy: 76.6 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

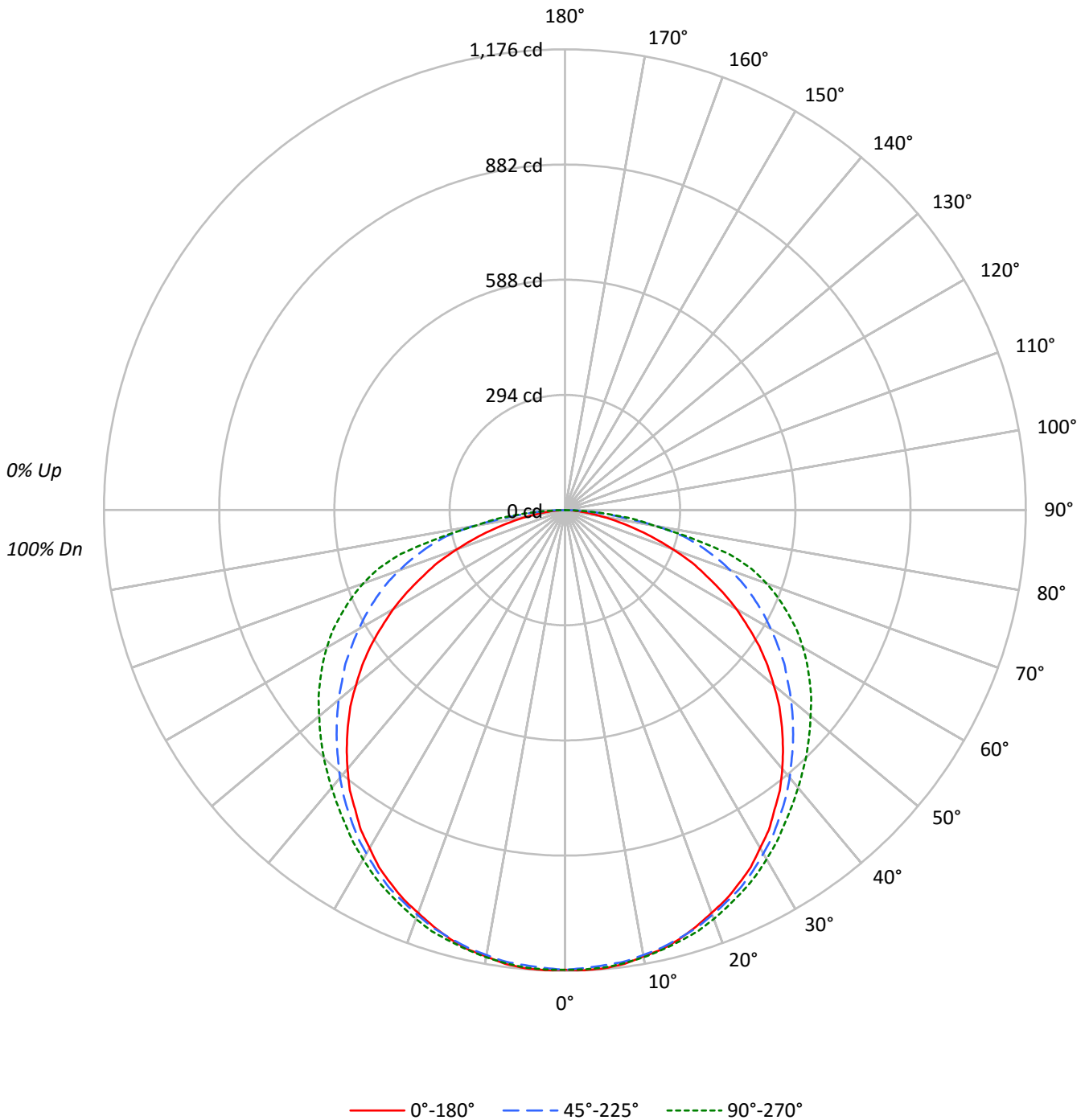
Input Watts (W): 48.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1579	1579	1579
5°	1585	1575	1583
10°	1581	1576	1583
15°	1578	1575	1586
20°	1566	1574	1590
25°	1561	1577	1594
30°	1547	1573	1599
35°	1532	1569	1605
40°	1515	1567	1626
45°	1490	1567	1662
50°	1457	1577	1713
55°	1420	1602	1789
60°	1360	1634	1888
65°	1273	1691	2004
70°	1158	1769	2155
75°	981	1867	2252
80°	775	1879	1822
85°	571	1430	1601



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.3	3.0
10°-20°	320.4	8.6
20°-30°	490.0	13.1
30°-40°	599.0	16.0
40°-50°	638.4	17.1
50°-60°	610.4	16.4
60°-70°	517.1	13.9
70°-80°	347.5	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°	921.7	24.7
0°-40°	1520.7	40.7
0°-60°	2769.4	74.2
0°-90°	3732.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3732.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1174	1174	1174	1174	1174	
5°	1174	1172	1166	1172	1172	112
15°	1133	1133	1131	1140	1138	319
25°	1051	1055	1062	1072	1074	485
35°	933	940	955	974	977	584
45°	783	796	824	859	874	604
55°	605	628	683	737	763	539
65°	400	441	531	602	629	397
75°	189	257	359	420	433	202
85°	37	76	93	100	104	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1173.6	1173.6	1173.6	1173.6	1173.6
2.5°	1175.5	1175.5	1169.9	1173.6	1173.6
5°	1173.6	1171.8	1166.2	1171.8	1171.8
7.5°	1168.1	1166.2	1162.5	1168.1	1166.2
10°	1156.9	1156.9	1153.2	1158.8	1158.8
12.5°	1147.7	1145.8	1144.0	1151.4	1149.5
15°	1132.9	1132.9	1131.0	1140.3	1138.4
17.5°	1114.4	1116.2	1118.1	1125.5	1127.3
20°	1094.0	1097.7	1099.6	1110.7	1110.7
22.5°	1075.5	1077.3	1081.1	1092.2	1092.2
25°	1051.4	1055.1	1062.5	1071.8	1073.6
27.5°	1027.4	1029.2	1038.5	1051.4	1053.3
30°	995.9	1001.5	1012.6	1027.4	1029.2
32.5°	968.1	973.7	986.6	1001.5	1005.2
35°	933.0	940.4	955.2	973.7	977.4
37.5°	901.5	907.0	925.6	945.9	951.5
40°	862.6	873.7	892.2	916.3	925.6
42.5°	823.7	834.9	857.1	888.5	899.6
45°	783.0	796.0	823.7	858.9	873.7
47.5°	742.3	757.1	788.6	829.3	846.0
50°	696.0	714.5	753.4	799.7	818.2
52.5°	651.6	673.8	716.4	768.2	792.3
55°	605.3	627.5	683.1	736.7	762.7
57.5°	553.5	583.1	644.2	705.3	733.0
60°	505.4	533.1	607.2	673.8	701.6
62.5°	453.5	490.5	570.1	640.5	668.3
65°	399.8	440.6	531.3	601.6	629.4
67.5°	351.7	396.1	492.4	562.7	590.5
70°	294.3	349.9	449.8	520.2	547.9
72.5°	240.6	301.7	405.4	473.9	499.8
75°	188.8	257.3	359.1	420.2	433.2
77.5°	140.7	212.9	311.0	336.9	327.6
80°	100.0	170.3	242.5	229.5	235.1
82.5°	64.8	129.6	149.9	170.3	175.9
85°	37.0	75.9	92.6	100.0	103.7
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)