

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: P310335

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CP125-W2A-U-5700K**

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: P310335
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 5700K 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: 3778.0 lumens
Efficiency: N/A
Efficacy: 77.3 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

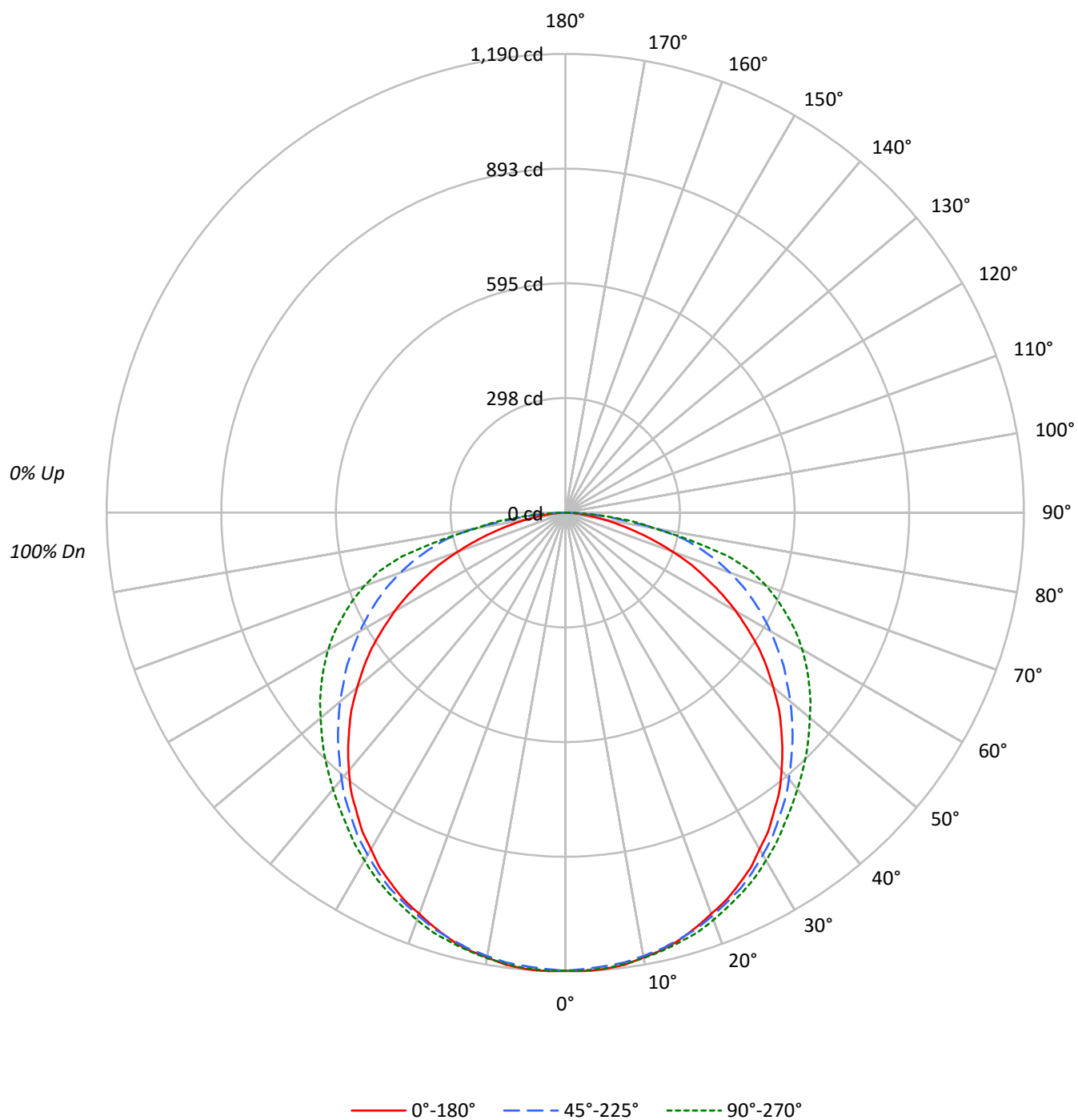
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	1599	1599	1599
5°	1605	1595	1602
10°	1600	1595	1603
15°	1597	1595	1605
20°	1586	1594	1610
25°	1580	1597	1614
30°	1566	1592	1619
35°	1551	1588	1625
40°	1534	1586	1646
45°	1508	1587	1683
50°	1475	1596	1734
55°	1437	1622	1811
60°	1377	1654	1911
65°	1289	1712	2028
70°	1172	1792	2182
75°	993	1890	2280
80°	784	1902	1844
85°	579	1447	1619



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.7	3.0
10°-20°	324.4	8.6
20°-30°	496.0	13.1
30°-40°	606.4	16.0
40°-50°	646.2	17.1
50°-60°	617.9	16.4
60°-70°	523.4	13.9
70°-80°	351.8	9.3
80°-90°	99.2	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°	933.0	24.7
0°-40°	1539.4	40.7
0°-60°	2803.5	74.2
0°-90°	3778.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3778.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1188	1186	1181	1186	1186	113
15°	1147	1147	1145	1154	1152	323
25°	1064	1068	1076	1085	1087	491
35°	944	952	967	986	989	592
45°	793	806	834	870	884	611
55°	613	635	692	746	772	546
65°	405	446	538	609	637	402
75°	191	260	364	425	438	205
85°	38	77	94	101	105	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1188.1	1188.1	1188.1	1188.1	1188.1
2.5°	1189.9	1189.9	1184.3	1188.1	1188.1
5°	1188.1	1186.2	1180.6	1186.2	1186.2
7.5°	1182.5	1180.6	1176.8	1182.5	1180.6
10°	1171.2	1171.2	1167.5	1173.1	1173.1
12.5°	1161.8	1160.0	1158.1	1165.6	1163.7
15°	1146.8	1146.8	1145.0	1154.3	1152.5
17.5°	1128.1	1130.0	1131.9	1139.4	1141.2
20°	1107.5	1111.2	1113.1	1124.4	1124.4
22.5°	1088.8	1090.6	1094.4	1105.6	1105.6
25°	1064.4	1068.1	1075.6	1085.0	1086.9
27.5°	1040.0	1041.9	1051.3	1064.4	1066.3
30°	1008.2	1013.8	1025.0	1040.0	1041.9
32.5°	980.1	985.7	998.8	1013.8	1017.5
35°	944.5	952.0	966.9	985.7	989.4
37.5°	912.6	918.2	937.0	957.6	963.2
40°	873.3	884.5	903.2	927.6	937.0
42.5°	833.9	845.1	867.6	899.5	910.7
45°	792.7	805.8	833.9	869.5	884.5
47.5°	751.4	766.4	798.3	839.5	856.4
50°	704.6	723.3	762.7	809.5	828.3
52.5°	659.6	682.1	725.2	777.7	802.0
55°	612.8	635.3	691.5	745.8	772.1
57.5°	560.3	590.3	652.1	714.0	742.1
60°	511.6	539.7	614.6	682.1	710.2
62.5°	459.1	496.6	577.2	648.4	676.5
65°	404.8	446.0	537.8	609.0	637.1
67.5°	356.0	401.0	498.5	569.7	597.8
70°	298.0	354.2	455.4	526.6	554.7
72.5°	243.6	305.5	410.4	479.7	506.0
75°	191.1	260.5	363.5	425.4	438.5
77.5°	142.4	215.5	314.8	341.1	331.7
80°	101.2	172.4	245.5	232.4	238.0
82.5°	65.6	131.2	151.8	172.4	178.0
85°	37.5	76.8	93.7	101.2	104.9
87.5°	16.9	28.1	37.5	37.5	35.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)