

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: P310323

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CA125-W2A-U-4500K**

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: P310323
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-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 3755.0 lumens
Efficiency: N/A
Efficacy: 77.4 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

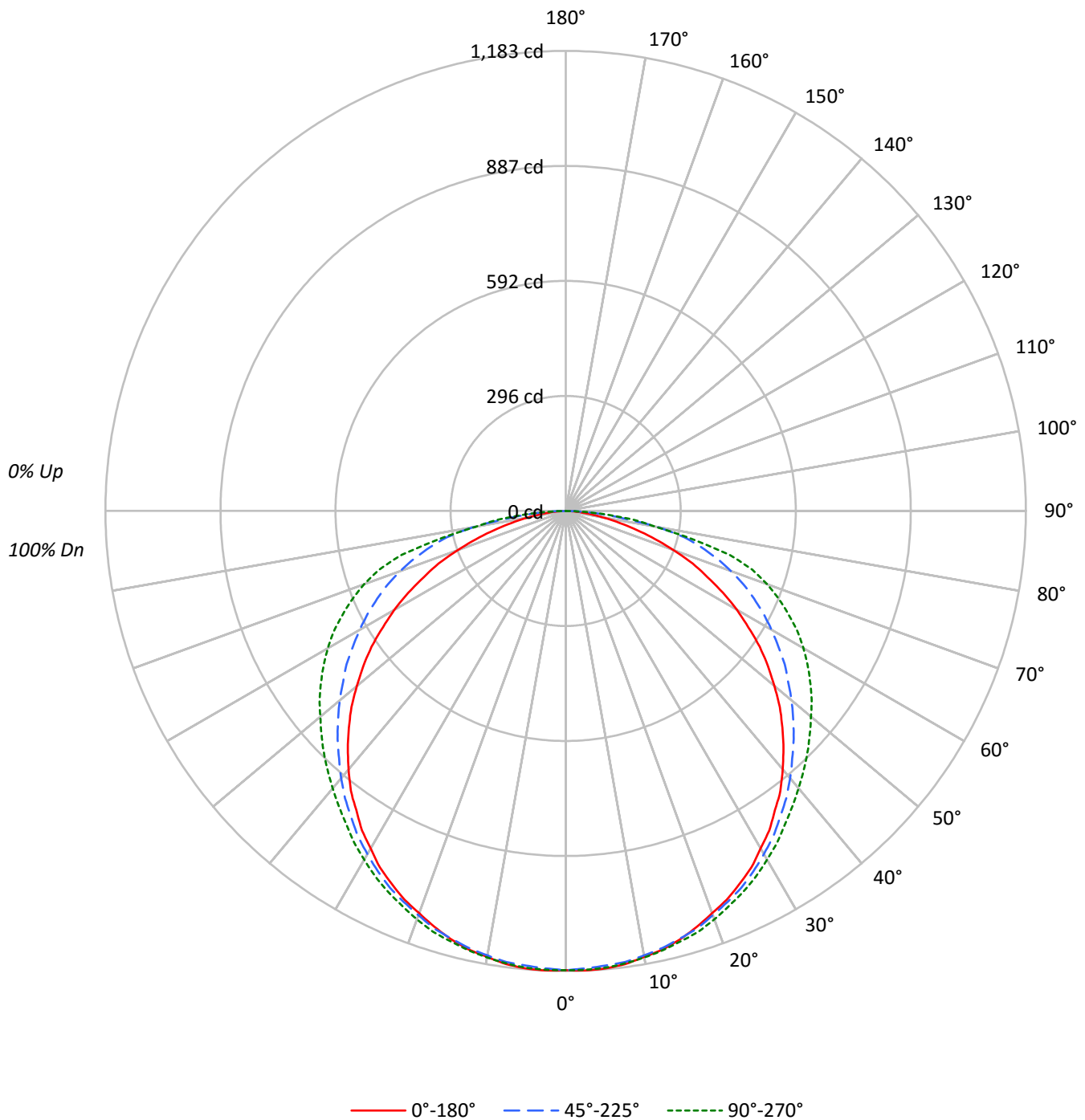
Input Watts (W): 48.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1589	1589	1589
5°	1595	1585	1592
10°	1590	1585	1593
15°	1588	1585	1596
20°	1576	1584	1600
25°	1571	1587	1604
30°	1557	1583	1609
35°	1542	1579	1615
40°	1524	1577	1636
45°	1499	1577	1673
50°	1466	1587	1723
55°	1429	1612	1800
60°	1368	1644	1900
65°	1281	1702	2016
70°	1165	1781	2169
75°	988	1878	2266
80°	779	1891	1832
85°	576	1437	1610



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.0	3.0
10°-20°	322.4	8.6
20°-30°	493.0	13.1
30°-40°	602.7	16.0
40°-50°	642.3	17.1
50°-60°	614.1	16.4
60°-70°	520.2	13.9
70°-80°	349.7	9.3
80°-90°	98.6	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°	927.4	24.7
0°-40°	1530.0	40.7
0°-60°	2786.5	74.2
0°-90°	3755.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3755.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1181	1181	1181	1181	1181	
5°	1181	1179	1173	1179	1179	112
15°	1140	1140	1138	1147	1146	321
25°	1058	1062	1069	1078	1080	488
35°	939	946	961	980	983	588
45°	788	801	829	864	879	608
55°	609	631	687	741	767	542
65°	402	443	534	605	633	399
75°	190	259	361	423	436	203
85°	37	76	93	101	104	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1180.8	1180.8	1180.8	1180.8	1180.8
2.5°	1182.7	1182.7	1177.1	1180.8	1180.8
5°	1180.8	1179.0	1173.4	1179.0	1179.0
7.5°	1175.3	1173.4	1169.7	1175.3	1173.4
10°	1164.1	1164.1	1160.4	1165.9	1165.9
12.5°	1154.8	1152.9	1151.0	1158.5	1156.6
15°	1139.9	1139.9	1138.0	1147.3	1145.5
17.5°	1121.2	1123.1	1125.0	1132.4	1134.3
20°	1100.8	1104.5	1106.3	1117.5	1117.5
22.5°	1082.1	1084.0	1087.7	1098.9	1098.9
25°	1057.9	1061.6	1069.1	1078.4	1080.3
27.5°	1033.7	1035.6	1044.9	1057.9	1059.8
30°	1002.0	1007.6	1018.8	1033.7	1035.6
32.5°	974.1	979.7	992.7	1007.6	1011.4
35°	938.7	946.2	961.1	979.7	983.4
37.5°	907.0	912.6	931.3	951.7	957.3
40°	867.9	879.1	897.7	921.9	931.3
42.5°	828.8	840.0	862.3	894.0	905.2
45°	787.8	800.9	828.8	864.2	879.1
47.5°	746.9	761.8	793.4	834.4	851.2
50°	700.3	718.9	758.0	804.6	823.2
52.5°	655.6	678.0	720.8	772.9	797.2
55°	609.0	631.4	687.3	741.3	767.4
57.5°	556.9	586.7	648.2	709.6	737.6
60°	508.5	536.4	610.9	678.0	705.9
62.5°	456.3	493.6	573.7	644.4	672.4
65°	402.3	443.3	534.5	605.3	633.3
67.5°	353.9	398.6	495.4	566.2	594.1
70°	296.1	352.0	452.6	523.4	551.3
72.5°	242.1	303.6	407.9	476.8	502.9
75°	190.0	258.9	361.3	422.8	435.8
77.5°	141.6	214.2	312.9	339.0	329.7
80°	100.6	171.4	244.0	231.0	236.5
82.5°	65.2	130.4	150.9	171.4	176.9
85°	37.3	76.4	93.1	100.6	104.3
87.5°	16.8	27.9	37.3	37.3	35.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)