

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: P313783

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-RDP-CP187-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: P313783
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: 24FCZ2-75HE-UNV-L83050-RDP-CP187-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB 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: 4597.0 lumens
Efficiency: N/A
Efficacy: 69.8 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

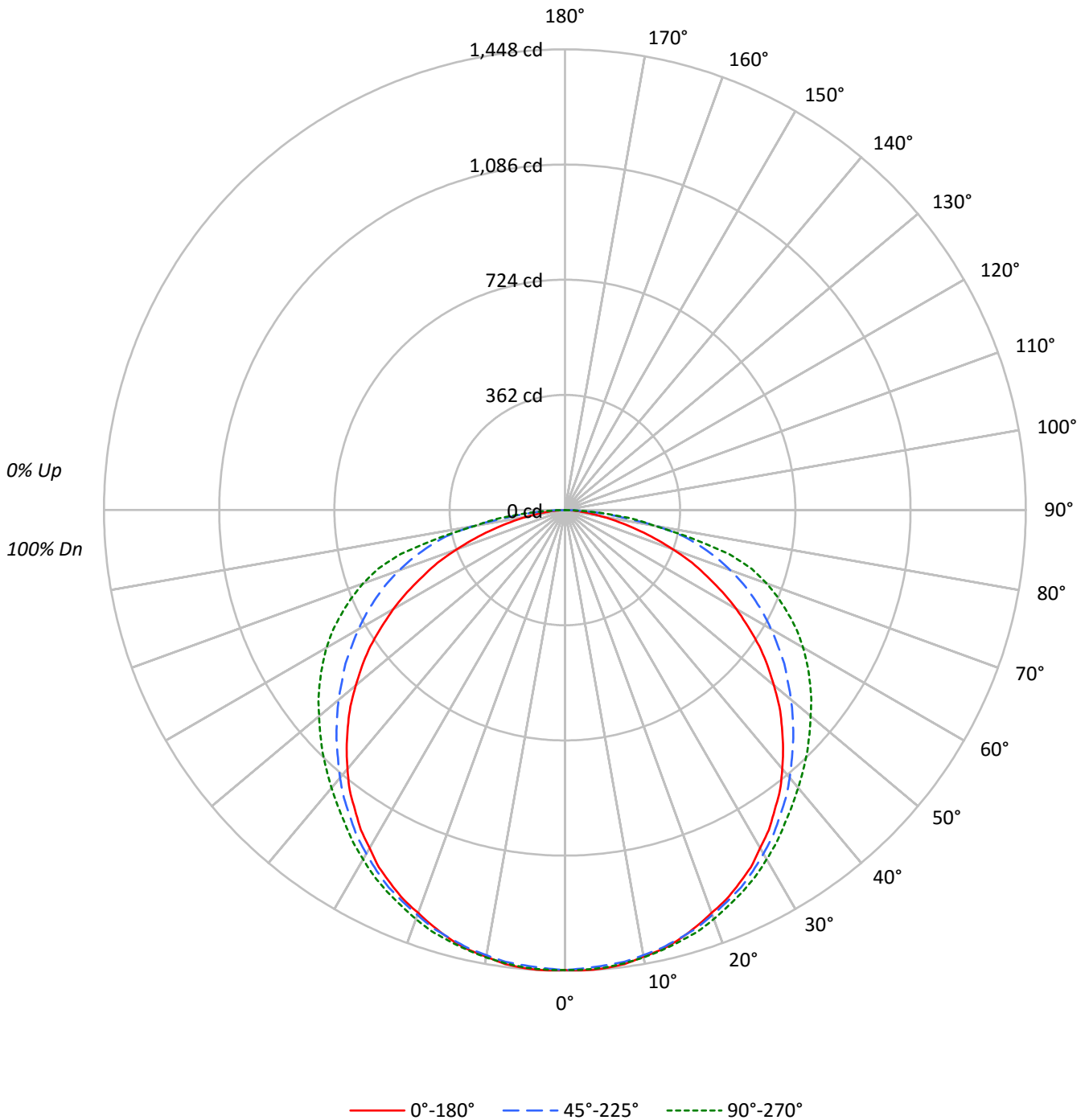
Input Watts (W): 65.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1945	1945	1945
5°	1952	1940	1949
10°	1947	1941	1950
15°	1944	1941	1953
20°	1930	1939	1959
25°	1923	1943	1963
30°	1906	1938	1970
35°	1888	1933	1977
40°	1866	1930	2002
45°	1835	1931	2048
50°	1795	1942	2110
55°	1749	1974	2204
60°	1675	2013	2326
65°	1568	2083	2468
70°	1426	2180	2655
75°	1209	2300	2774
80°	954	2314	2244
85°	704	1760	1971



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.1	3.0
10°-20°	394.7	8.6
20°-30°	603.5	13.1
30°-40°	737.8	16.0
40°-50°	786.3	17.1
50°-60°	751.8	16.4
60°-70°	636.9	13.9
70°-80°	428.1	9.3
80°-90°	120.7	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°	1135.3	24.7
0°-40°	1873.1	40.7
0°-60°	3411.3	74.2
0°-90°	4597.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4597.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1446	1446	1446	1446	1446	
5°	1446	1443	1436	1443	1443	137
15°	1396	1396	1393	1405	1402	393
25°	1295	1300	1309	1320	1322	597
35°	1149	1158	1177	1199	1204	720
45°	964	980	1015	1058	1076	744
55°	746	773	841	908	939	664
65°	492	543	654	741	775	489
75°	233	317	442	518	534	249
85°	46	94	114	123	128	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1445.6	1445.6	1445.6	1445.6	1445.6
2.5°	1447.9	1447.9	1441.1	1445.6	1445.6
5°	1445.6	1443.3	1436.5	1443.3	1443.3
7.5°	1438.8	1436.5	1431.9	1438.8	1436.5
10°	1425.1	1425.1	1420.5	1427.4	1427.4
12.5°	1413.7	1411.4	1409.1	1418.3	1416.0
15°	1395.5	1395.5	1393.2	1404.6	1402.3
17.5°	1372.7	1374.9	1377.2	1386.3	1388.6
20°	1347.6	1352.1	1354.4	1368.1	1368.1
22.5°	1324.8	1327.1	1331.6	1345.3	1345.3
25°	1295.1	1299.7	1308.8	1320.2	1322.5
27.5°	1265.5	1267.8	1279.2	1295.1	1297.4
30°	1226.7	1233.6	1247.3	1265.5	1267.8
32.5°	1192.5	1199.4	1215.3	1233.6	1238.1
35°	1149.2	1158.3	1176.6	1199.4	1203.9
37.5°	1110.4	1117.3	1140.1	1165.2	1172.0
40°	1062.6	1076.2	1099.0	1128.7	1140.1
42.5°	1014.7	1028.4	1055.7	1094.5	1108.2
45°	964.5	980.5	1014.7	1058.0	1076.2
47.5°	914.3	932.6	971.4	1021.5	1042.0
50°	857.3	880.1	928.0	985.0	1007.8
52.5°	802.6	830.0	882.4	946.3	975.9
55°	745.6	773.0	841.4	907.5	939.4
57.5°	681.8	718.3	793.5	868.7	902.9
60°	622.5	656.7	747.9	830.0	864.2
62.5°	558.6	604.2	702.3	788.9	823.1
65°	492.5	542.7	654.4	741.1	775.3
67.5°	433.2	488.0	606.5	693.2	727.4
70°	362.5	431.0	554.1	640.7	674.9
72.5°	296.4	371.7	499.4	583.7	615.6
75°	232.6	316.9	442.4	517.6	533.6
77.5°	173.3	262.2	383.1	415.0	403.6
80°	123.1	209.8	298.7	282.7	289.6
82.5°	79.8	159.6	184.7	209.8	216.6
85°	45.6	93.5	114.0	123.1	127.7
87.5°	20.5	34.2	45.6	45.6	43.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)