

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: P313789

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-RDP-CP250-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: P313789
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-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 4560.0 lumens
Efficiency: N/A
Efficacy: 69.2 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

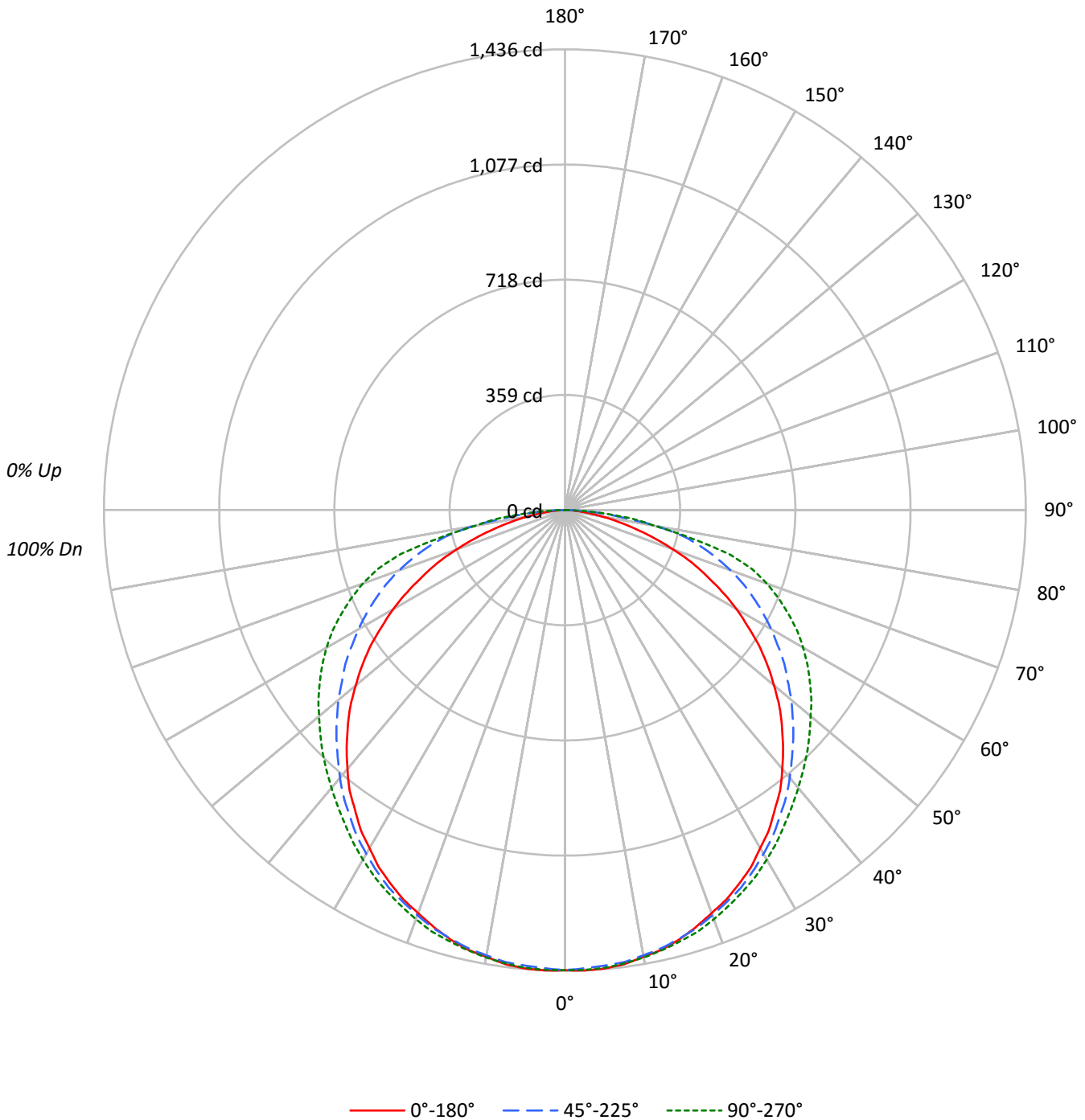
Input Watts (W): 65.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1929	1929	1929
5°	1937	1925	1934
10°	1931	1925	1934
15°	1928	1925	1938
20°	1914	1924	1943
25°	1907	1927	1948
30°	1891	1922	1954
35°	1872	1917	1962
40°	1851	1915	1986
45°	1820	1915	2031
50°	1780	1927	2093
55°	1735	1958	2186
60°	1662	1996	2307
65°	1556	2067	2448
70°	1415	2162	2634
75°	1199	2281	2752
80°	946	2296	2226
85°	698	1746	1956



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.0	3.0
10°-20°	391.5	8.6
20°-30°	598.7	13.1
30°-40°	731.9	16.0
40°-50°	780.0	17.1
50°-60°	745.8	16.4
60°-70°	631.8	13.9
70°-80°	424.6	9.3
80°-90°	119.8	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°	1126.2	24.7
0°-40°	1858.0	40.7
0°-60°	3383.9	74.2
0°-90°	4560.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4560.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1434	1434	1434	1434	1434	
5°	1434	1432	1425	1432	1432	136
15°	1384	1384	1382	1393	1391	390
25°	1285	1289	1298	1310	1312	592
35°	1140	1149	1167	1190	1194	714
45°	957	973	1006	1050	1068	738
55°	740	767	835	900	932	659
65°	489	538	649	735	769	485
75°	231	314	439	513	529	247
85°	45	93	113	122	127	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1434.0	1434.0	1434.0	1434.0	1434.0
2.5°	1436.3	1436.3	1429.5	1434.0	1434.0
5°	1434.0	1431.7	1424.9	1431.7	1431.7
7.5°	1427.2	1424.9	1420.4	1427.2	1424.9
10°	1413.6	1413.6	1409.1	1415.9	1415.9
12.5°	1402.3	1400.1	1397.8	1406.8	1404.6
15°	1384.2	1384.2	1382.0	1393.3	1391.0
17.5°	1361.6	1363.9	1366.1	1375.2	1377.4
20°	1336.7	1341.3	1343.5	1357.1	1357.1
22.5°	1314.1	1316.4	1320.9	1334.5	1334.5
25°	1284.7	1289.2	1298.3	1309.6	1311.9
27.5°	1255.3	1257.6	1268.9	1284.7	1287.0
30°	1216.9	1223.6	1237.2	1255.3	1257.6
32.5°	1182.9	1189.7	1205.5	1223.6	1228.2
35°	1140.0	1149.0	1167.1	1189.7	1194.2
37.5°	1101.5	1108.3	1130.9	1155.8	1162.6
40°	1054.0	1067.6	1090.2	1119.6	1130.9
42.5°	1006.5	1020.1	1047.2	1085.7	1099.2
45°	956.7	972.6	1006.5	1049.5	1067.6
47.5°	907.0	925.1	963.5	1013.3	1033.6
50°	850.4	873.1	920.6	977.1	999.7
52.5°	796.2	823.3	875.3	938.7	968.1
55°	739.6	766.8	834.6	900.2	931.9
57.5°	676.3	712.5	787.1	861.8	895.7
60°	617.5	651.4	741.9	823.3	857.2
62.5°	554.1	599.4	696.6	782.6	816.5
65°	488.6	538.3	649.1	735.1	769.0
67.5°	429.7	484.0	601.6	687.6	721.5
70°	359.6	427.5	549.6	635.6	669.5
72.5°	294.0	368.7	495.3	579.0	610.7
75°	230.7	314.4	438.8	513.4	529.3
77.5°	171.9	260.1	380.0	411.7	400.3
80°	122.1	208.1	296.3	280.5	287.3
82.5°	79.2	158.3	183.2	208.1	214.9
85°	45.2	92.7	113.1	122.1	126.7
87.5°	20.4	33.9	45.2	45.2	43.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)