

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: NEO-RAY

Report Number: P243385

Luminaire Tested: **S123RDR-H340D927-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243385
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-64)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D927-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 974.9 lumens
Efficiency: N/A
Efficacy: 87.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

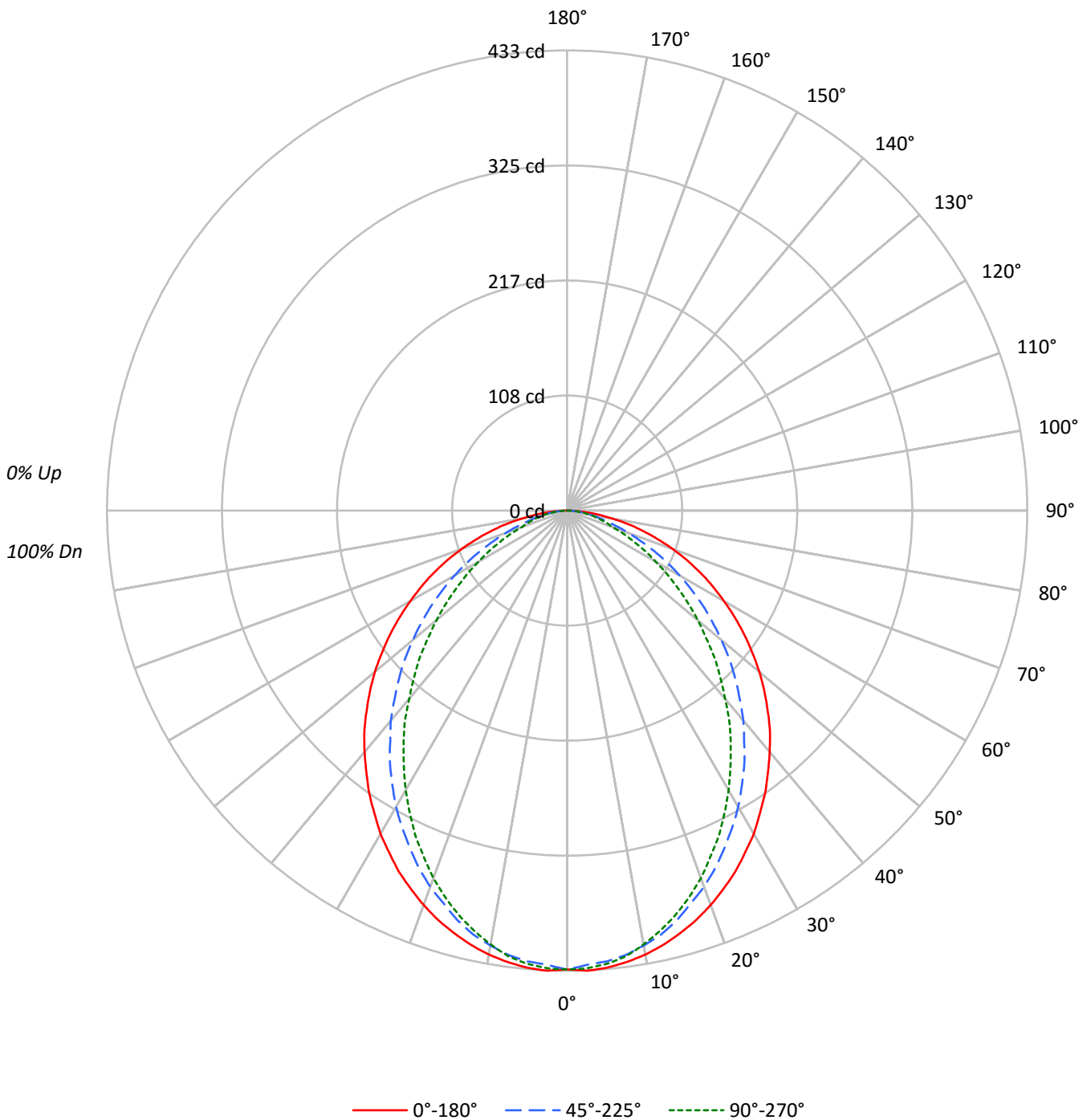
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P243385

CATALOG NUMBER: S123RDR-H340D927-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P243385

CATALOG NUMBER: S123RDR-H340D927-X4F0-XX-UDD-F-W

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	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	62
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54
5	78	66	58	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42
7	67	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5234	5234	5234
5°	5254	5181	5209
10°	5221	5114	5102
15°	5165	5007	4944
20°	5095	4859	4748
25°	5011	4684	4515
30°	4916	4507	4252
35°	4805	4303	3970
40°	4692	4082	3657
45°	4577	3838	3365
50°	4452	3572	3027
55°	4303	3295	2684
60°	4133	2967	2339
65°	3967	2596	1996
70°	3739	2176	1598
75°	3447	1723	1522
80°	3009	1529	1389
85°	2531	1335	1293



TEST NUMBER: P243385

CATALOG NUMBER: S123RDR-H340D927-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.6	4.2
10°-20°	113.1	11.6
20°-30°	162.8	16.7
30°-40°	183.4	18.8
40°-50°	175.2	18.0
50°-60°	143.2	14.7
60°-70°	96.2	9.9
70°-80°	48.0	4.9
80°-90°	12.4	1.3
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°	316.5	32.5
0°-40°	499.9	51.3
0°-60°	818.3	83.9
0°-90°	974.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	974.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	432	432	432	432	432	
5°	432	430	426	429	428	41
15°	412	409	399	397	394	116
25°	375	366	350	343	338	172
35°	325	312	291	275	268	203
45°	267	251	224	204	196	206
55°	204	185	156	134	127	182
65°	138	119	90	74	70	137
75°	74	56	37	33	32	78
85°	18	11	10	9	9	21
90°	0	0	0	0	0	



TEST NUMBER: P243385

CATALOG NUMBER: S123RDR-H340D927-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	431.8	431.8	431.8	431.8	431.8	431.8	431.8	431.8	431.8	431.8	431.8
2.5°	433.4	432.4	431.1	431.5	431.8	432.1	432.1	431.8	430.8	429.5	427.8
5°	431.8	430.8	429.5	429.5	430.1	430.1	430.1	429.8	428.8	427.5	425.8
7.5°	428.5	427.8	426.1	426.5	426.8	426.8	426.8	426.5	425.2	423.5	421.8
10°	424.2	423.2	421.8	421.8	422.2	422.2	422.2	421.5	419.8	417.9	415.5
12.5°	418.5	417.5	416.2	416.2	416.2	416.2	416.2	415.2	412.5	410.6	408.6
15°	411.6	410.6	409.2	409.2	408.9	408.6	407.9	406.2	403.9	401.6	399.0
17.5°	403.9	402.6	400.9	400.6	400.3	399.9	399.0	398.0	394.6	391.3	387.3
20°	395.0	393.6	392.0	391.7	390.7	389.7	389.0	387.0	383.4	379.4	376.7
22.5°	385.0	383.7	382.0	381.4	379.4	378.7	377.7	374.7	370.8	367.1	364.1
25°	374.7	373.1	371.1	370.1	367.8	366.5	366.1	361.8	357.8	353.9	350.2
27.5°	362.8	361.5	359.8	357.8	355.5	353.9	353.2	349.2	344.2	339.6	336.3
30°	351.2	349.2	347.6	345.2	341.9	340.3	338.9	334.9	330.6	325.0	322.0
32.5°	337.6	336.3	334.3	332.0	328.6	327.3	325.3	320.4	314.7	310.7	306.1
35°	324.7	323.3	320.4	318.0	313.4	312.1	310.1	305.8	299.5	294.8	290.8
37.5°	310.4	308.7	306.4	303.1	299.1	297.5	294.8	290.5	283.2	278.6	273.6
40°	296.5	294.2	291.5	287.9	283.9	282.2	279.9	273.6	267.6	262.3	258.0
42.5°	282.6	279.9	276.6	273.3	269.0	266.6	264.0	258.0	251.4	246.4	240.4
45°	267.0	265.0	261.7	257.7	252.7	251.0	248.1	241.8	235.1	229.8	223.9
47.5°	251.7	249.4	246.1	242.1	237.1	234.8	231.8	225.5	218.9	212.2	206.9
50°	236.1	233.8	229.8	225.8	221.2	218.2	215.6	209.3	202.0	196.0	189.4
52.5°	219.5	217.6	214.2	210.3	204.3	202.0	199.3	192.3	185.4	178.4	172.4
55°	203.6	202.3	198.3	194.3	188.0	185.4	182.7	175.4	168.5	161.5	155.9
57.5°	187.0	186.0	182.1	177.4	171.8	169.1	165.8	158.5	151.9	144.9	139.0
60°	170.5	169.5	165.5	160.8	155.5	152.2	148.6	142.9	135.3	129.0	122.4
62.5°	154.5	153.2	149.9	144.9	139.0	135.6	132.3	125.7	118.7	112.1	106.1
65°	138.3	136.6	132.7	127.7	122.0	119.1	115.7	109.4	102.5	96.2	90.5
67.5°	122.0	120.4	116.1	112.1	105.5	102.5	99.5	93.2	86.6	80.3	74.9
70°	105.5	103.8	100.5	95.2	89.5	86.6	83.6	76.9	71.0	66.3	61.4
72.5°	89.2	87.9	84.6	79.6	74.3	71.3	68.0	62.3	57.0	52.1	48.4
75°	73.6	71.6	68.6	64.0	58.7	56.0	53.7	48.1	43.1	39.8	36.8
77.5°	58.7	56.4	53.1	49.4	44.4	41.8	39.5	34.8	31.5	29.2	28.5
80°	43.1	42.8	39.5	35.5	31.2	29.2	26.9	23.9	22.9	22.6	21.9
82.5°	30.2	28.9	26.2	22.6	19.2	17.9	17.2	16.6	15.9	15.9	15.3
85°	18.2	16.9	14.6	11.6	10.9	10.6	10.3	10.3	9.9	9.6	9.6
87.5°	8.0	6.6	5.0	4.6	4.3	4.3	4.6	4.6	4.6	4.3	4.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P243385

CATALOG NUMBER: S123RDR-H340D927-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	431.8	431.8	431.8	431.8	431.8	431.8	431.8	431.8	431.8	431.8
2.5°	428.5	430.1	431.1	431.5	431.5	431.5	431.8	431.8	431.5	431.1
5°	426.1	427.8	428.5	429.1	429.1	429.1	429.1	429.1	428.8	428.1
7.5°	422.5	423.5	424.5	424.2	424.2	423.8	423.5	423.8	423.2	423.2
10°	415.9	416.9	417.5	416.5	416.5	416.9	416.9	416.5	415.5	414.5
12.5°	408.2	409.2	408.2	408.6	407.9	407.2	406.9	406.6	405.6	404.9
15°	398.3	398.3	397.6	397.6	396.6	395.3	395.0	395.3	394.0	394.0
17.5°	387.3	386.7	385.7	385.0	384.7	384.7	383.4	383.4	381.7	381.4
20°	375.4	374.7	373.7	372.1	371.4	371.8	370.4	369.4	368.4	368.1
22.5°	362.8	361.1	360.2	358.5	357.2	357.2	356.2	354.5	353.5	352.5
25°	348.5	346.9	344.9	343.6	342.6	340.9	340.3	338.9	337.9	337.6
27.5°	334.0	331.3	328.6	327.3	326.7	324.7	323.7	323.0	321.0	320.7
30°	318.4	316.4	313.1	310.7	309.1	309.4	307.1	305.8	304.8	303.8
32.5°	303.4	300.1	296.8	293.8	291.8	291.5	289.2	287.9	286.9	285.9
35°	286.5	283.2	279.2	276.6	274.6	273.6	271.3	270.6	269.0	268.3
37.5°	269.6	266.0	262.0	258.7	257.3	255.0	254.0	252.4	251.0	251.0
40°	253.0	248.7	244.7	240.8	239.1	237.8	235.1	233.8	232.1	231.1
42.5°	235.8	230.8	227.2	223.5	221.2	220.2	217.2	215.6	213.9	213.6
45°	218.5	213.6	208.9	205.3	204.3	202.3	199.3	197.0	196.7	196.3
47.5°	201.0	196.0	191.7	187.7	186.4	184.1	182.1	180.4	178.4	177.4
50°	184.1	179.1	174.4	170.1	168.5	166.5	164.5	162.2	161.5	160.5
52.5°	167.1	161.5	156.5	152.6	151.2	149.6	147.2	145.3	144.3	143.6
55°	149.9	144.3	139.9	136.0	134.3	133.3	130.7	129.0	127.7	127.0
57.5°	133.0	127.3	123.4	120.4	118.1	117.1	114.4	112.8	112.1	111.8
60°	117.1	111.8	107.4	104.5	102.5	101.5	99.5	97.8	96.8	96.5
62.5°	101.1	96.5	92.5	89.5	88.2	86.9	85.2	83.9	82.9	82.9
65°	85.9	81.2	77.6	75.3	74.0	73.3	71.3	70.6	69.6	69.6
67.5°	71.0	67.7	65.0	62.0	61.0	61.0	59.0	58.4	57.7	57.7
70°	58.0	55.1	52.1	50.4	49.4	49.1	47.4	46.4	45.8	45.1
72.5°	45.4	42.8	40.1	39.8	39.8	39.5	39.5	38.8	38.8	39.1
75°	34.8	34.2	33.5	33.5	33.2	32.8	32.8	32.5	32.5	32.5
77.5°	27.9	27.5	27.2	26.9	26.9	26.5	26.2	26.2	26.2	26.2
80°	21.2	20.9	20.9	20.6	20.2	20.6	20.2	20.2	19.9	19.9
82.5°	14.9	14.9	14.9	14.6	14.6	14.6	14.6	14.3	14.3	14.6
85°	9.3	9.3	9.3	9.3	9.0	9.3	9.0	9.0	9.0	9.3
87.5°	4.0	4.3	4.0	4.3	4.3	4.0	4.0	4.0	4.0	4.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)