

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: P242515

Luminaire Tested: **S123DR-S340D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242515
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-S340D935-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1159.8 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

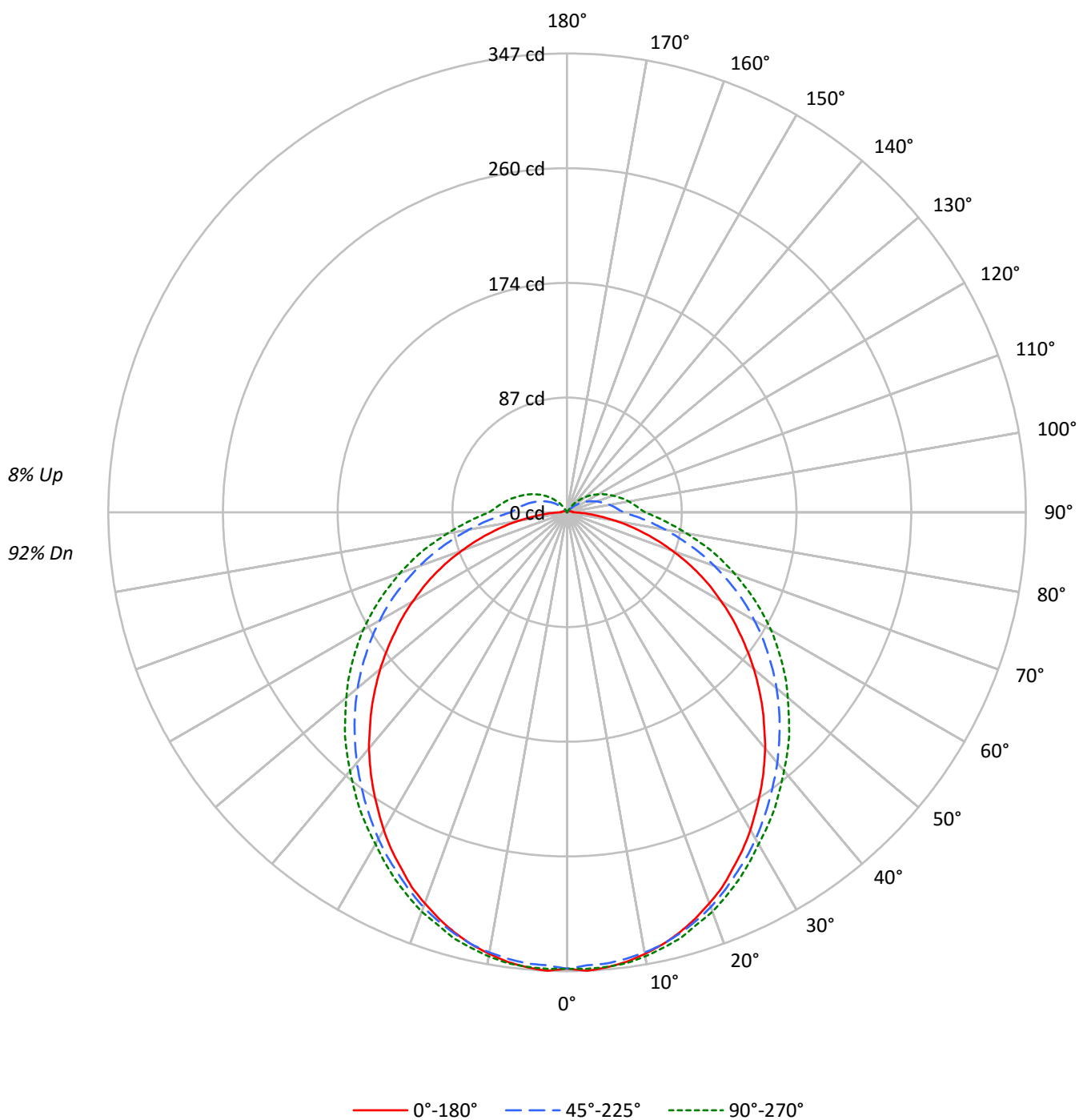
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	92		
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76	73		
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63	60		
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52	50		
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45	42		
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39	36		
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34	32		
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30	28		
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25		
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22		
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	20		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4183	4183	4183
5°	4196	4070	4070
10°	4158	3970	3944
15°	4104	3856	3809
20°	4028	3728	3661
25°	3933	3583	3508
30°	3835	3451	3352
35°	3726	3312	3228
40°	3623	3187	3095
45°	3507	3064	2987
50°	3394	2944	2868
55°	3268	2819	2761
60°	3146	2693	2651
65°	3019	2560	2520
70°	2831	2408	2386
75°	2593	2234	2249
80°	2314	2063	2090
85°	2054	1931	1988

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.7	2.8
10°-20°	93.3	8.0
20°-30°	139.6	12.0
30°-40°	166.6	14.4
40°-50°	174.3	15.0
50°-60°	163.6	14.1
60°-70°	136.7	11.8
70°-80°	97.7	8.4
80°-90°	58.1	5.0
90°-100°	36.5	3.2
100°-110°	26.8	2.3
110°-120°	17.9	1.5
120°-130°	10.2	0.9
130°-140°	4.6	0.4
140°-150°	1.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	265.6	22.9
0°-40°	432.3	37.3
0°-60°	770.2	66.4
0°-90°	1062.7	91.6
90°-120°	81.3	7.0
90°-150°	97.1	8.4
90°-180°	97.0	8.4
0°-180°	1159.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	345	345	345	345	345	
5°	346	345	342	346	345	33
15°	329	330	330	334	333	93
25°	297	301	302	307	307	137
35°	256	262	266	272	274	160
45°	209	218	227	235	238	161
55°	159	172	185	196	198	143
65°	110	125	141	153	156	109
75°	60	77	96	109	113	64
85°	18	37	57	70	74	19
90°	5	23	42	55	59	4
95°	4	19	37	49	53	3
105°	3	12	28	39	42	3
115°	2	6	20	29	32	2
125°	1	1	12	20	23	1
135°	1	0	4	11	13	1
145°	0	0	0	3	4	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	345.1	345.1	345.1	345.1	345.1
2.5°	347.0	345.9	342.9	345.9	345.5
5°	345.5	344.7	342.5	345.5	345.1
7.5°	342.9	342.9	340.6	344.4	344.0
10°	339.1	339.8	338.0	341.7	341.0
12.5°	334.6	335.7	334.6	338.0	337.2
15°	328.9	330.1	329.7	333.5	333.1
17.5°	322.2	324.4	324.1	327.4	326.7
20°	314.7	316.9	317.7	321.0	321.4
22.5°	306.8	309.0	310.1	314.7	314.3
25°	297.0	300.7	301.9	306.8	306.8
27.5°	287.6	291.7	294.0	298.1	298.5
30°	277.4	282.3	285.3	289.8	289.8
32.5°	266.2	271.8	275.9	280.8	281.9
35°	255.6	261.6	266.5	272.2	273.7
37.5°	244.4	251.1	256.8	263.2	264.3
40°	233.1	239.8	247.4	253.8	255.3
42.5°	220.7	229.3	237.2	244.4	246.6
45°	209.0	218.0	227.4	234.6	237.6
47.5°	196.6	206.8	217.3	225.2	227.4
50°	184.6	195.1	206.8	215.4	218.0
52.5°	171.8	183.1	196.2	205.3	208.6
55°	159.4	171.8	185.3	195.5	198.5
57.5°	147.4	160.1	174.8	185.0	188.3
60°	134.6	148.1	163.5	174.1	178.2
62.5°	122.6	136.5	153.0	163.5	167.3
65°	110.1	124.8	141.4	152.6	156.4
67.5°	97.7	113.2	129.7	142.1	145.1
70°	84.6	100.8	118.8	130.8	134.6
72.5°	72.6	88.7	107.5	119.9	123.7
75°	59.8	77.4	96.2	108.6	113.2
77.5°	48.9	66.5	85.3	98.5	101.9
80°	37.2	55.6	75.2	88.0	91.7
82.5°	27.1	45.9	65.8	78.6	82.3
85°	18.4	37.2	57.1	69.9	73.7
87.5°	11.3	30.1	49.2	62.0	65.8
90°	4.9	23.3	42.5	55.3	59.0
92.5°	4.5	20.7	39.5	51.9	55.3
95°	4.1	18.8	37.2	48.9	52.6
97.5°	3.8	17.3	35.0	46.2	50.0
100°	3.4	15.4	32.7	43.6	47.4
102.5°	3.0	13.5	30.5	41.0	44.7
105°	3.0	12.0	28.2	38.7	42.1
107.5°	2.6	10.5	25.9	36.1	39.5
110°	2.3	9.0	24.1	33.8	36.8

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.3	7.5	21.8	31.2	34.6
115°	1.9	6.4	19.9	28.9	32.0
117.5°	1.9	4.9	17.7	26.7	29.7
120°	1.5	3.4	15.8	24.4	27.1
122.5°	1.5	2.3	13.9	22.2	24.8
125°	1.1	1.1	12.0	19.9	22.6
127.5°	1.1	0.8	10.2	17.7	20.3
130°	1.1	0.8	8.3	15.4	17.7
132.5°	0.8	0.8	6.4	13.2	15.8
135°	0.8	0.4	4.5	11.3	13.2
137.5°	0.8	0.4	3.0	9.0	10.9
140°	0.4	0.4	1.5	7.1	9.0
142.5°	0.4	0.0	0.0	4.9	6.8
145°	0.4	0.0	0.0	3.0	4.5
147.5°	0.0	0.0	0.0	1.1	2.6
150°	0.0	0.0	0.0	0.0	0.8
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)