

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: P242505

Luminaire Tested: **S123DR-S340D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242505
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-S340D840-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1360.4 lumens
Efficiency: N/A
Efficacy: 117.3 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

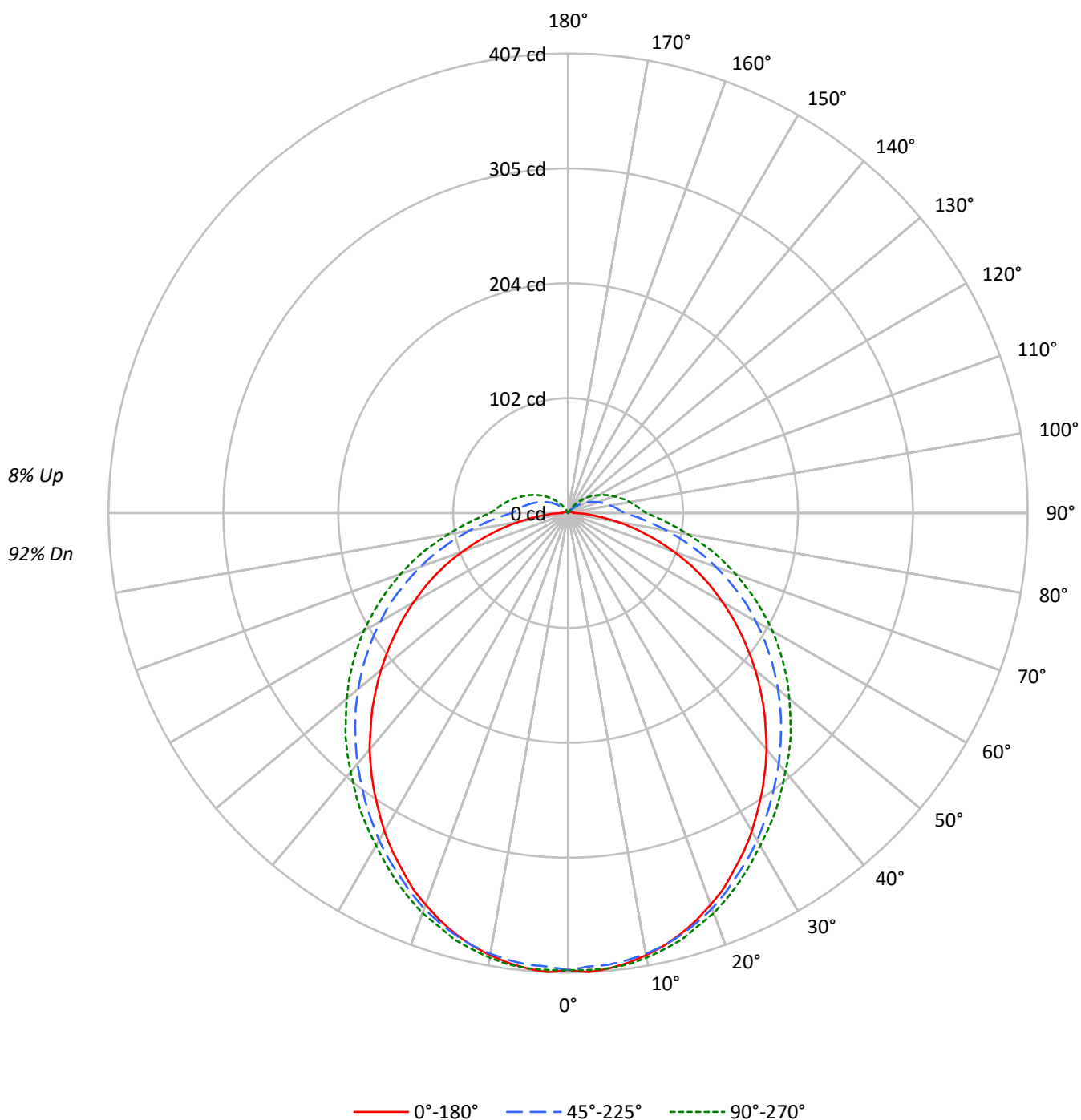
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242505

CATALOG NUMBER: S123DR-S340D840-X4F0-XX-UDD-D-W

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4907	4907	4907
5°	4921	4774	4774
10°	4876	4655	4625
15°	4814	4523	4468
20°	4724	4373	4295
25°	4612	4202	4114
30°	4499	4048	3933
35°	4370	3885	3786
40°	4249	3736	3630
45°	4115	3595	3504
50°	3981	3452	3364
55°	3834	3308	3238
60°	3690	3159	3109
65°	3542	3002	2955
70°	3320	2824	2799
75°	3039	2622	2637
80°	2719	2420	2453
85°	2411	2266	2330

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.4	2.8
10°-20°	109.5	8.0
20°-30°	163.7	12.0
30°-40°	195.4	14.4
40°-50°	204.5	15.0
50°-60°	191.9	14.1
60°-70°	160.3	11.8
70°-80°	114.6	8.4
80°-90°	68.2	5.0
90°-100°	42.8	3.1
100°-110°	31.5	2.3
110°-120°	21.0	1.5
120°-130°	12.0	0.9
130°-140°	5.4	0.4
140°-150°	1.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	311.6	22.9
0°-40°	507.0	37.3
0°-60°	903.4	66.4
0°-90°	1246.5	91.6
90°-120°	95.4	7.0
90°-150°	113.9	8.4
90°-180°	114.0	8.4
0°-180°	1360.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	405	405	405	405	405	
5°	405	404	402	405	405	38
15°	386	387	387	391	391	109
25°	348	353	354	360	360	161
35°	300	307	313	319	321	188
45°	245	256	267	275	279	189
55°	187	202	217	229	233	167
65°	129	146	166	179	183	128
75°	70	91	113	127	133	75
85°	22	44	67	82	86	22
90°	6	27	50	65	69	4
95°	5	22	44	57	62	4
105°	4	14	33	45	49	4
115°	2	8	23	34	38	2
125°	1	1	14	23	26	1
135°	1	0	5	13	15	1
145°	0	0	0	4	5	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

TEST NUMBER: P242505

CATALOG NUMBER: S123DR-S340D840-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	404.8	404.8	404.8	404.8	404.8
2.5°	407.0	405.7	402.1	405.7	405.2
5°	405.2	404.3	401.7	405.2	404.8
7.5°	402.1	402.1	399.5	403.9	403.5
10°	397.7	398.6	396.4	400.8	399.9
12.5°	392.4	393.8	392.4	396.4	395.5
15°	385.8	387.1	386.7	391.1	390.7
17.5°	377.9	380.5	380.1	384.1	383.2
20°	369.1	371.7	372.6	376.6	377.0
22.5°	359.8	362.4	363.8	369.1	368.6
25°	348.3	352.7	354.1	359.8	359.8
27.5°	337.3	342.2	344.8	349.7	350.1
30°	325.4	331.1	334.7	340.0	340.0
32.5°	312.2	318.8	323.6	329.4	330.7
35°	299.8	306.9	312.6	319.2	321.0
37.5°	286.6	294.5	301.2	308.7	310.0
40°	273.4	281.3	290.1	297.6	299.4
42.5°	258.8	269.0	278.2	286.6	289.3
45°	245.2	255.7	266.8	275.1	278.7
47.5°	230.6	242.5	254.9	264.1	266.8
50°	216.5	228.8	242.5	252.7	255.7
52.5°	201.5	214.7	230.2	240.7	244.7
55°	187.0	201.5	217.4	229.3	232.8
57.5°	172.8	187.8	205.0	216.9	220.9
60°	157.9	173.7	191.8	204.2	209.0
62.5°	143.7	160.1	179.5	191.8	196.2
65°	129.2	146.4	165.8	179.0	183.4
67.5°	114.6	132.7	152.1	166.7	170.2
70°	99.2	118.2	139.3	153.4	157.9
72.5°	85.1	104.1	126.1	140.7	145.1
75°	70.1	90.8	112.9	127.4	132.7
77.5°	57.3	78.0	100.1	115.5	119.5
80°	43.7	65.3	88.2	103.2	107.6
82.5°	31.7	53.8	77.2	92.2	96.6
85°	21.6	43.7	67.0	82.0	86.4
87.5°	13.2	35.3	57.8	72.8	77.2
90°	5.7	27.3	49.8	64.8	69.2
92.5°	5.3	24.3	46.3	60.8	64.8
95°	4.9	22.0	43.7	57.3	61.7
97.5°	4.4	20.3	41.0	54.2	58.6
100°	4.0	18.1	38.4	51.1	55.6
102.5°	3.5	15.9	35.7	48.1	52.5
105°	3.5	14.1	33.1	45.4	49.4
107.5°	3.1	12.3	30.4	42.3	46.3
110°	2.6	10.6	28.2	39.7	43.2

TEST NUMBER: P242505

CATALOG NUMBER: S123DR-S340D840-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.6	8.8	25.6	36.6	40.6
115°	2.2	7.5	23.4	34.0	37.5
117.5°	2.2	5.7	20.7	31.3	34.8
120°	1.8	4.0	18.5	28.7	31.7
122.5°	1.8	2.6	16.3	26.0	29.1
125°	1.3	1.3	14.1	23.4	26.5
127.5°	1.3	0.9	11.9	20.7	23.8
130°	1.3	0.9	9.7	18.1	20.7
132.5°	0.9	0.9	7.5	15.4	18.5
135°	0.9	0.4	5.3	13.2	15.4
137.5°	0.9	0.4	3.5	10.6	12.8
140°	0.4	0.4	1.8	8.4	10.6
142.5°	0.4	0.0	0.0	5.7	7.9
145°	0.4	0.0	0.0	3.5	5.3
147.5°	0.0	0.0	0.0	1.3	3.1
150°	0.0	0.0	0.0	0.0	0.9
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)