

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: P242496

Luminaire Tested: **S123DR-S340D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242496
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-S340D830-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1269.6 lumens
Efficiency: N/A
Efficacy: 109.5 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

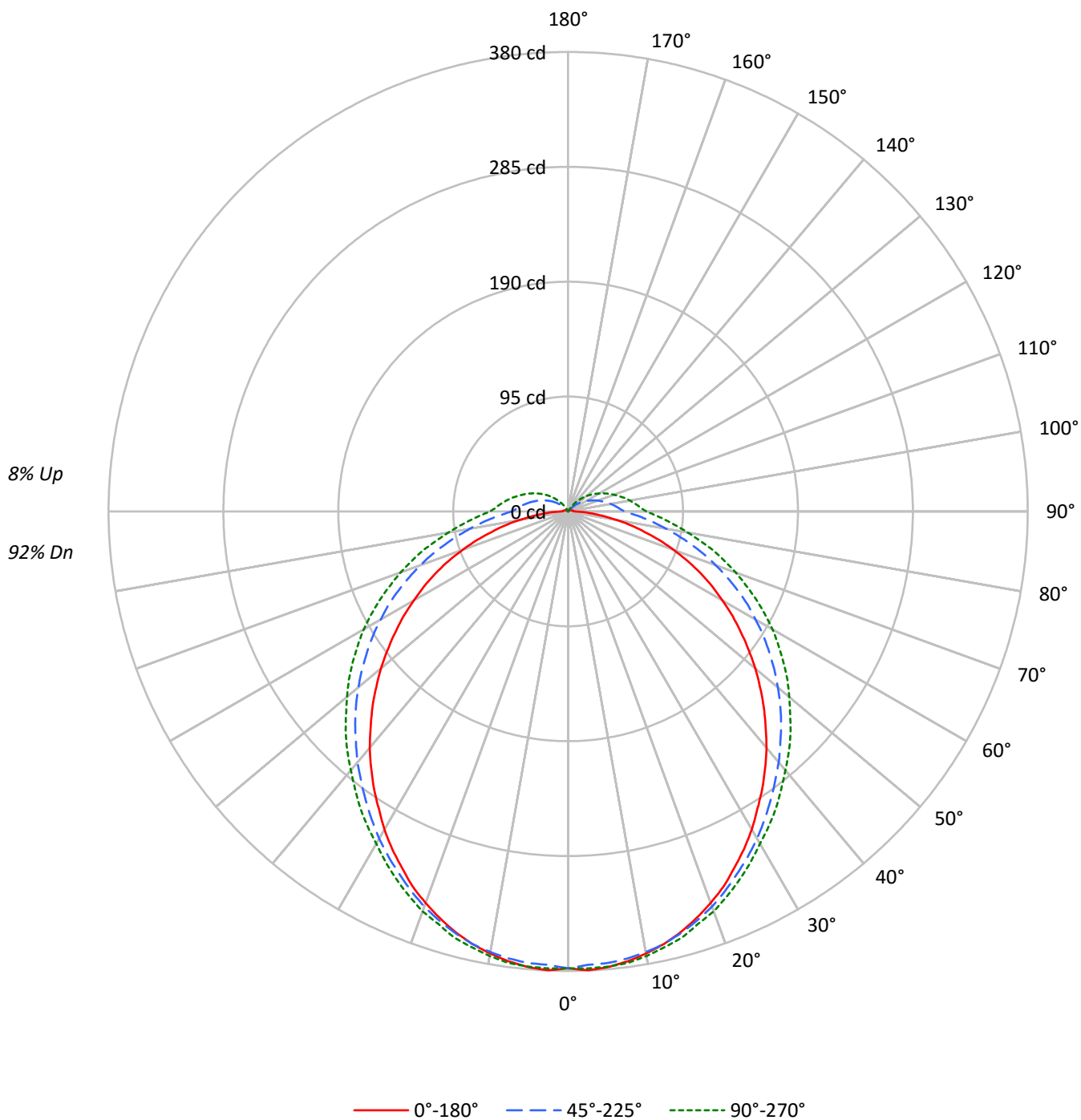
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
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°	4579	4579	4579
5°	4593	4455	4455
10°	4552	4345	4318
15°	4493	4221	4169
20°	4409	4081	4009
25°	4305	3922	3840
30°	4199	3778	3670
35°	4079	3626	3534
40°	3966	3488	3387
45°	3840	3355	3270
50°	3716	3222	3140
55°	3578	3087	3023
60°	3443	2949	2902
65°	3306	2801	2759
70°	3099	2635	2611
75°	2835	2448	2462
80°	2532	2258	2289
85°	2255	2117	2177

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.8	2.8
10°-20°	102.2	8.0
20°-30°	152.8	12.0
30°-40°	182.4	14.4
40°-50°	190.9	15.0
50°-60°	179.1	14.1
60°-70°	149.6	11.8
70°-80°	107.0	8.4
80°-90°	63.6	5.0
90°-100°	40.0	3.1
100°-110°	29.4	2.3
110°-120°	19.6	1.5
120°-130°	11.2	0.9
130°-140°	5.0	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°	290.8	22.9
0°-40°	473.2	37.3
0°-60°	843.2	66.4
0°-90°	1163.3	91.6
90°-120°	89.0	7.0
90°-150°	106.3	8.4
90°-180°	106.0	8.3
0°-180°	1269.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	378	378	378	378	378	
5°	378	377	375	378	378	36
15°	360	361	361	365	365	101
25°	325	329	330	336	336	150
35°	280	286	292	298	300	175
45°	229	239	249	257	260	176
55°	174	188	203	214	217	156
65°	121	137	155	167	171	119
75°	65	85	105	119	124	70
85°	20	41	63	76	81	21
90°	5	26	46	60	65	4
95°	4	21	41	54	58	4
105°	3	13	31	42	46	3
115°	2	7	22	32	35	2
125°	1	1	13	22	25	1
135°	1	0	5	12	14	1
145°	0	0	0	3	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

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	377.8	377.8	377.8	377.8	377.8
2.5°	379.8	378.6	375.3	378.6	378.2
5°	378.2	377.4	374.9	378.2	377.8
7.5°	375.3	375.3	372.9	377.0	376.6
10°	371.2	372.0	370.0	374.1	373.3
12.5°	366.3	367.5	366.3	370.0	369.1
15°	360.1	361.3	360.9	365.0	364.6
17.5°	352.7	355.2	354.7	358.4	357.6
20°	344.5	346.9	347.7	351.5	351.9
22.5°	335.8	338.3	339.5	344.5	344.0
25°	325.1	329.2	330.5	335.8	335.8
27.5°	314.8	319.4	321.8	326.3	326.8
30°	303.7	309.1	312.4	317.3	317.3
32.5°	291.4	297.5	302.1	307.4	308.7
35°	279.8	286.4	291.8	298.0	299.6
37.5°	267.5	274.9	281.1	288.1	289.3
40°	255.2	262.6	270.8	277.8	279.4
42.5°	241.6	251.0	259.7	267.5	270.0
45°	228.8	238.7	249.0	256.8	260.1
47.5°	215.2	226.3	237.9	246.5	249.0
50°	202.1	213.6	226.3	235.8	238.7
52.5°	188.1	200.4	214.8	224.7	228.4
55°	174.5	188.1	202.9	214.0	217.3
57.5°	161.3	175.3	191.4	202.5	206.2
60°	147.3	162.1	179.0	190.5	195.1
62.5°	134.2	149.4	167.5	179.0	183.1
65°	120.6	136.6	154.7	167.1	171.2
67.5°	107.0	123.9	142.0	155.6	158.9
70°	92.6	110.3	130.0	143.2	147.3
72.5°	79.4	97.1	117.7	131.3	135.4
75°	65.4	84.8	105.4	118.9	123.9
77.5°	53.5	72.8	93.4	107.8	111.5
80°	40.7	60.9	82.3	96.3	100.4
82.5°	29.6	50.2	72.0	86.0	90.1
85°	20.2	40.7	62.6	76.5	80.7
87.5°	12.3	32.9	53.9	67.9	72.0
90°	5.3	25.5	46.5	60.5	64.6
92.5°	4.9	22.6	43.2	56.8	60.5
95°	4.5	20.6	40.7	53.5	57.6
97.5°	4.1	18.9	38.3	50.6	54.7
100°	3.7	16.9	35.8	47.7	51.9
102.5°	3.3	14.8	33.3	44.9	49.0
105°	3.3	13.2	30.9	42.4	46.1
107.5°	2.9	11.5	28.4	39.5	43.2
110°	2.5	9.9	26.3	37.0	40.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.5	8.2	23.9	34.2	37.9
115°	2.1	7.0	21.8	31.7	35.0
117.5°	2.1	5.3	19.3	29.2	32.5
120°	1.6	3.7	17.3	26.7	29.6
122.5°	1.6	2.5	15.2	24.3	27.2
125°	1.2	1.2	13.2	21.8	24.7
127.5°	1.2	0.8	11.1	19.3	22.2
130°	1.2	0.8	9.1	16.9	19.3
132.5°	0.8	0.8	7.0	14.4	17.3
135°	0.8	0.4	4.9	12.3	14.4
137.5°	0.8	0.4	3.3	9.9	11.9
140°	0.4	0.4	1.6	7.8	9.9
142.5°	0.4	0.0	0.0	5.3	7.4
145°	0.4	0.0	0.0	3.3	4.9
147.5°	0.0	0.0	0.0	1.2	2.9
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)