

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: P242535

Luminaire Tested: **S123RDR-S340D835-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242535  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDR-S340D835-X4F0-XX-UDD-F-W  
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1216.2 lumens  
Efficiency: N/A  
Efficacy: 104.8 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

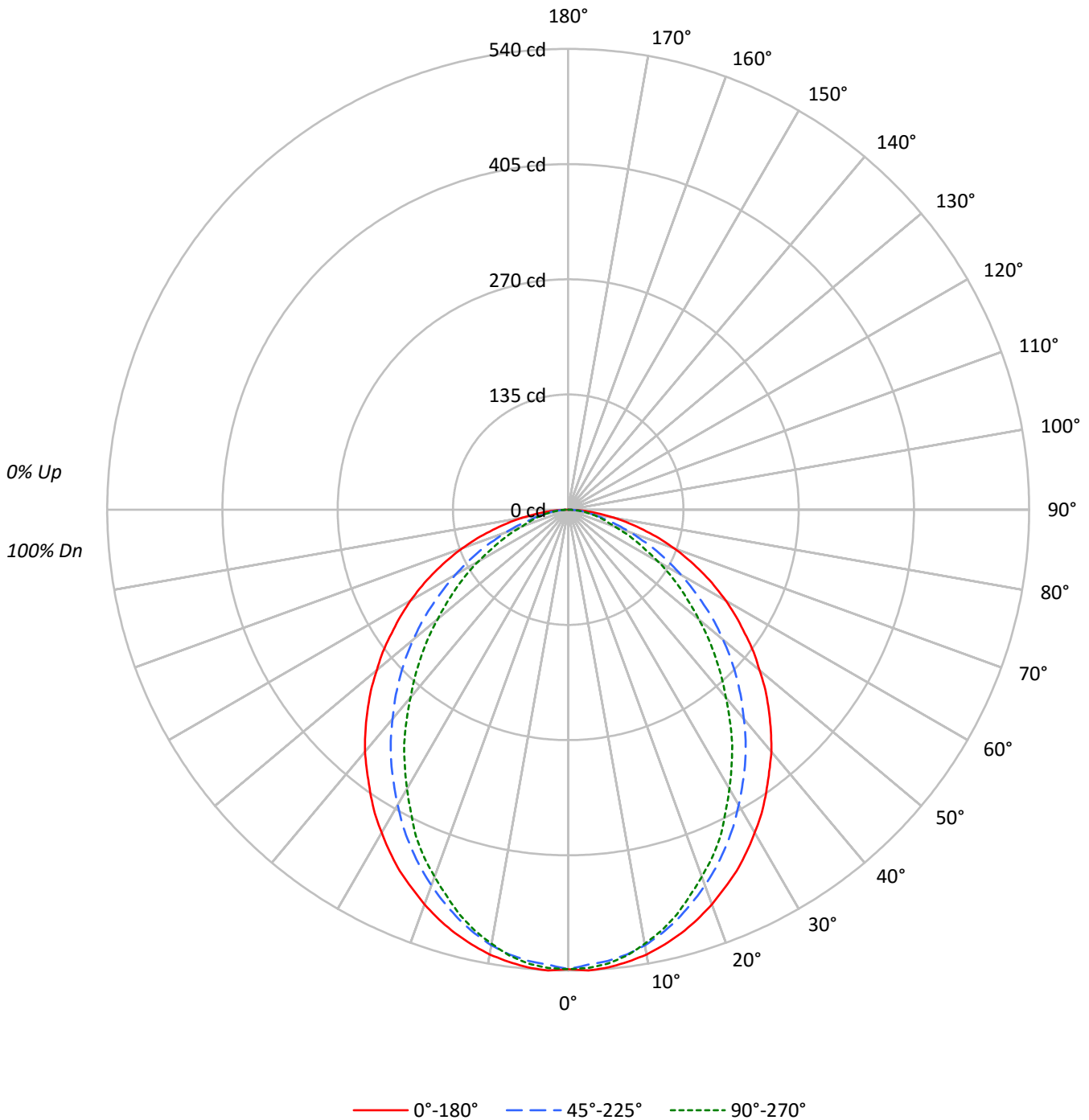
Input Watts (W): 11.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54
5	78	66	57	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	55	49	44	54	48	44	42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	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	29	39	34	29	28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6526	6526	6526
5°	6551	6460	6497
10°	6514	6379	6357
15°	6444	6229	6164
20°	6348	6043	5903
25°	6248	5834	5647
30°	6118	5592	5286
35°	5983	5349	4956
40°	5859	5063	4546
45°	5696	4783	4176
50°	5516	4464	3762
55°	5334	4098	3377
60°	5166	3704	2953
65°	4948	3281	2530
70°	4675	2754	2041
75°	4276	2168	1920
80°	3811	1920	1766
85°	3213	1697	1585



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.6	4.2
10°-20°	140.8	11.6
20°-30°	202.7	16.7
30°-40°	228.3	18.8
40°-50°	218.4	18.0
50°-60°	178.8	14.7
60°-70°	120.5	9.9
70°-80°	60.4	5.0
80°-90°	15.8	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°	394.1	32.4
0°-40°	622.4	51.2
0°-60°	1019.5	83.8
0°-90°	1216.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1216.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	538	538	538	538	538	
5°	538	536	531	535	534	51
15°	514	509	496	494	491	145
25°	467	456	436	427	422	215
35°	404	389	362	343	335	253
45°	332	313	279	254	244	256
55°	252	231	194	168	160	226
65°	172	148	114	93	88	171
75°	91	70	46	42	41	97
85°	23	14	12	11	11	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	538.4	538.4	538.4	538.4	538.4
2.5°	540.5	538.8	533.6	538.4	537.5
5°	538.4	536.2	530.9	534.9	534.0
7.5°	534.4	532.2	525.7	528.3	527.0
10°	529.2	526.1	518.3	518.7	516.5
12.5°	521.8	518.3	508.2	507.8	505.2
15°	513.5	508.7	496.4	494.3	491.2
17.5°	503.4	498.2	482.9	478.5	474.2
20°	492.1	485.1	468.5	462.8	457.6
22.5°	479.4	471.1	453.2	445.8	441.0
25°	467.2	456.3	436.2	427.0	422.2
27.5°	452.3	440.6	418.7	406.5	399.1
30°	437.1	424.0	399.5	384.7	377.7
32.5°	421.8	406.5	380.3	363.7	356.3
35°	404.3	388.6	361.5	342.7	334.9
37.5°	386.8	369.8	341.4	320.5	310.9
40°	370.3	351.0	320.0	297.3	287.3
42.5°	351.5	332.3	300.0	274.6	265.9
45°	332.3	312.6	279.0	254.1	243.6
47.5°	313.5	291.7	258.5	231.4	222.2
50°	292.5	272.0	236.7	209.6	199.5
52.5°	273.8	251.1	216.1	187.7	179.0
55°	252.4	231.0	193.9	168.5	159.8
57.5°	233.2	210.0	172.5	148.5	141.0
60°	213.1	189.1	152.8	129.2	121.8
62.5°	193.0	169.0	132.7	110.9	103.0
65°	172.5	148.5	114.4	93.0	88.2
67.5°	151.9	127.5	94.3	78.2	72.9
70°	131.9	108.3	77.7	62.4	57.6
72.5°	111.8	88.6	61.6	49.8	48.5
75°	91.3	70.3	46.3	41.9	41.0
77.5°	72.5	53.3	36.2	33.6	32.7
80°	54.6	36.7	27.5	26.2	25.3
82.5°	37.5	22.7	19.6	18.3	18.3
85°	23.1	13.5	12.2	11.4	11.4
87.5°	10.5	5.7	5.7	5.2	4.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)