

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: P242195

Luminaire Tested: **S121RDR-S305D840-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242195  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-23)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121RDR-S305D840-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 986.1 lumens  
Efficiency: N/A  
Efficacy: 85.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 0.92 / 1.09  
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')  
CIE Type: Direct

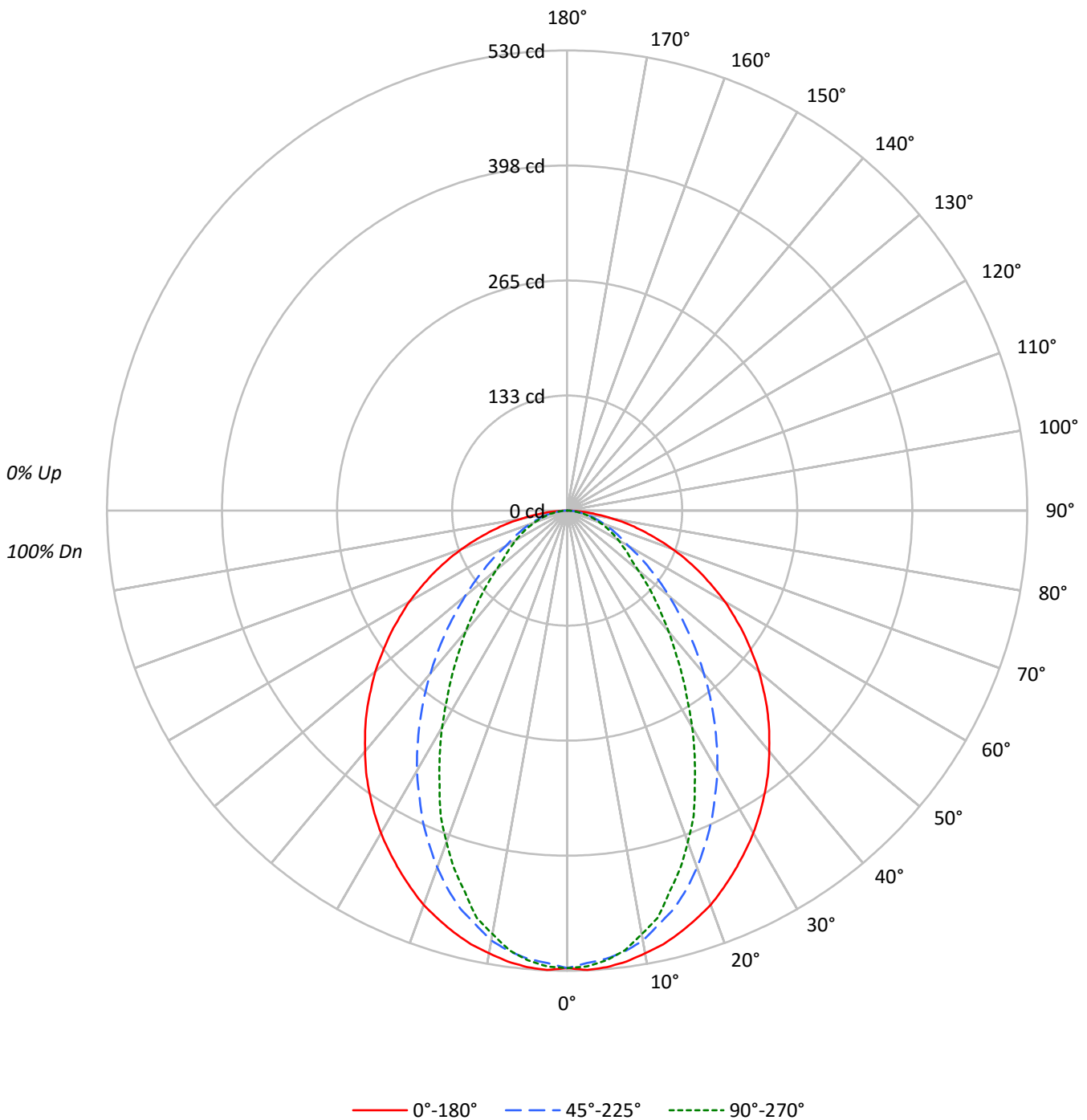
Input Watts (W): 11.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77					75				
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67					65				
4	86	76	68	62	84	74	67	61	72	65	60	70	64	60	68	63	59					57				
5	80	68	60	54	78	67	60	54	65	59	53	63	57	53	62	56	52					50				
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47					45				
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42					40				
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38					37				
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35					33				
10	58	45	38	33	56	45	37	33	44	37	33	43	37	32	42	36	32					31				

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

	0°	45°	90°
0°	15612	15612	15612
5°	15698	15410	15463
10°	15576	15125	14899
15°	15433	14568	13957
20°	15239	13792	12817
25°	14947	12874	11374
30°	14678	11841	9850
35°	14353	10685	8341
40°	14002	9465	7028
45°	13673	8259	5929
50°	13294	7071	4900
55°	12868	5966	4375
60°	12439	4836	4047
65°	11842	4361	3744
70°	11158	3933	3439
75°	10246	3583	3183
80°	8958	3157	2867
85°	7343	2686	2414



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.3	5.0
10°-20°	134.1	13.6
20°-30°	183.1	18.6
30°-40°	190.3	19.3
40°-50°	166.3	16.9
50°-60°	125.7	12.7
60°-70°	83.0	8.4
70°-80°	42.8	4.3
80°-90°	11.4	1.2
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°	366.6	37.2
0°-40°	556.9	56.5
0°-60°	848.9	86.1
0°-90°	986.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	986.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	527	527	527	527	527	
5°	528	525	518	522	520	50
15°	503	496	475	462	455	142
25°	457	439	394	361	348	211
35°	397	362	295	247	231	248
45°	326	277	197	153	142	251
55°	249	189	116	88	85	223
65°	169	105	62	55	53	167
75°	90	41	31	29	28	95
85°	22	9	8	8	7	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	526.9	526.9	526.9	526.9	526.9
2.5°	529.6	526.9	521.6	526.5	525.6
5°	527.8	524.7	518.1	522.1	519.9
7.5°	523.8	520.3	511.9	513.2	510.6
10°	517.7	513.7	502.7	500.5	495.2
12.5°	511.5	505.3	488.1	483.7	480.6
15°	503.1	495.6	474.9	462.5	455.0
17.5°	493.4	483.3	457.2	440.5	432.6
20°	483.3	470.0	437.4	414.5	406.5
22.5°	470.5	455.0	415.8	388.5	380.5
25°	457.2	439.2	393.8	361.1	347.9
27.5°	443.1	421.1	369.1	332.5	317.9
30°	429.0	402.1	346.1	302.0	287.9
32.5°	413.2	383.2	320.6	274.3	257.5
35°	396.8	361.6	295.4	246.9	230.6
37.5°	380.5	341.7	270.3	221.3	204.2
40°	362.0	321.0	244.7	194.5	181.7
42.5°	344.4	299.4	220.5	173.7	160.1
45°	326.3	277.3	197.1	153.0	141.5
47.5°	306.9	255.7	174.2	134.9	123.5
50°	288.4	232.8	153.4	117.3	106.3
52.5°	268.1	211.2	134.0	99.2	93.0
55°	249.1	189.2	115.5	87.7	84.7
57.5°	228.8	168.0	98.3	79.4	75.8
60°	209.9	146.8	81.6	70.5	68.3
62.5°	188.7	126.5	71.0	62.6	60.4
65°	168.9	105.4	62.2	54.7	53.4
67.5°	149.0	87.3	53.8	47.6	46.3
70°	128.8	69.2	45.4	41.0	39.7
72.5°	108.9	52.9	37.9	34.4	33.5
75°	89.5	41.4	31.3	28.7	27.8
77.5°	72.3	31.7	24.7	22.5	22.0
80°	52.5	23.4	18.5	17.2	16.8
82.5°	35.7	15.9	13.2	12.3	11.5
85°	21.6	8.8	7.9	7.5	7.1
87.5°	8.8	4.0	3.5	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)