

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: P242186

Luminaire Tested: **S121RDR-S305D830-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242186  
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-S305D830-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 920.3 lumens  
Efficiency: N/A  
Efficacy: 79.3 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

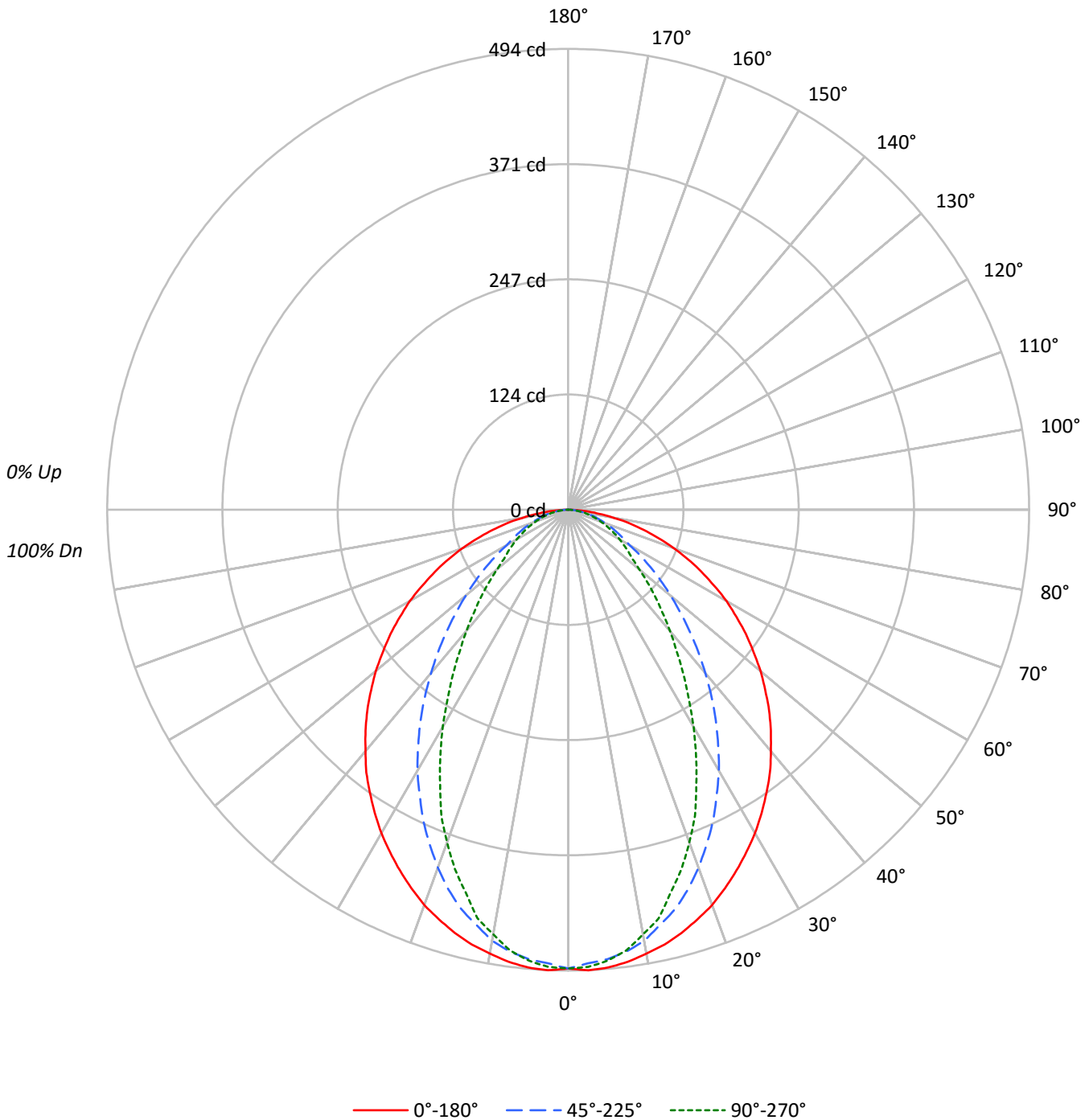
Input Watts (W): 11.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	14572	14572	14572
5°	14651	14384	14431
10°	14535	14117	13906
15°	14405	13595	13028
20°	14221	12871	11963
25°	13953	12015	10615
30°	13699	11054	9193
35°	13398	9972	7784
40°	13070	8834	6560
45°	12759	7710	5535
50°	12404	6601	4573
55°	12010	5569	4081
60°	11609	4510	3781
65°	11049	4066	3491
70°	10413	3673	3205
75°	9559	3343	2965
80°	8361	2952	2662
85°	6867	2516	2244



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.0	5.0
10°-20°	125.2	13.6
20°-30°	170.9	18.6
30°-40°	177.6	19.3
40°-50°	155.2	16.9
50°-60°	117.3	12.7
60°-70°	77.5	8.4
70°-80°	39.9	4.3
80°-90°	10.6	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°	342.2	37.2
0°-40°	519.8	56.5
0°-60°	792.3	86.1
0°-90°	920.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	920.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	492	492	492	492	492	
5°	493	490	484	487	485	47
15°	470	463	443	432	425	132
25°	427	410	368	337	325	197
35°	370	338	276	230	215	232
45°	304	259	184	143	132	235
55°	232	176	108	82	79	208
65°	158	98	58	51	50	156
75°	84	39	29	27	26	89
85°	20	8	7	7	7	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	491.8	491.8	491.8	491.8	491.8
2.5°	494.3	491.8	486.8	491.4	490.6
5°	492.6	489.7	483.6	487.3	485.2
7.5°	488.9	485.6	477.8	479.0	476.6
10°	483.1	479.4	469.2	467.1	462.2
12.5°	477.4	471.6	455.6	451.5	448.6
15°	469.6	462.6	443.2	431.7	424.7
17.5°	460.5	451.0	426.8	411.1	403.7
20°	451.0	438.7	408.2	386.8	379.4
22.5°	439.1	424.7	388.1	362.6	355.2
25°	426.8	409.9	367.5	337.0	324.7
27.5°	413.6	393.0	344.5	310.3	296.7
30°	400.4	375.3	323.1	281.9	268.7
32.5°	385.6	357.6	299.2	256.0	240.3
35°	370.4	337.5	275.7	230.5	215.2
37.5°	355.2	318.9	252.3	206.6	190.5
40°	337.9	299.6	228.4	181.5	169.6
42.5°	321.4	279.4	205.8	162.1	149.4
45°	304.5	258.9	184.0	142.8	132.1
47.5°	286.4	238.7	162.6	125.9	115.2
50°	269.1	217.3	143.2	109.5	99.2
52.5°	250.2	197.1	125.1	92.6	86.8
55°	232.5	176.5	107.8	81.9	79.0
57.5°	213.6	156.8	91.8	74.1	70.8
60°	195.9	137.0	76.1	65.8	63.8
62.5°	176.1	118.1	66.3	58.4	56.4
65°	157.6	98.4	58.0	51.0	49.8
67.5°	139.1	81.5	50.2	44.4	43.2
70°	120.2	64.6	42.4	38.3	37.0
72.5°	101.6	49.4	35.4	32.1	31.3
75°	83.5	38.7	29.2	26.7	25.9
77.5°	67.5	29.6	23.0	21.0	20.6
80°	49.0	21.8	17.3	16.0	15.6
82.5°	33.3	14.8	12.3	11.5	10.7
85°	20.2	8.2	7.4	7.0	6.6
87.5°	8.2	3.7	3.3	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)