

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: P243070

Luminaire Tested: **S121RDR-H305D940-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243070  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-62)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121RDR-H305D940-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 819.2 lumens  
Efficiency: N/A  
Efficacy: 73.1 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

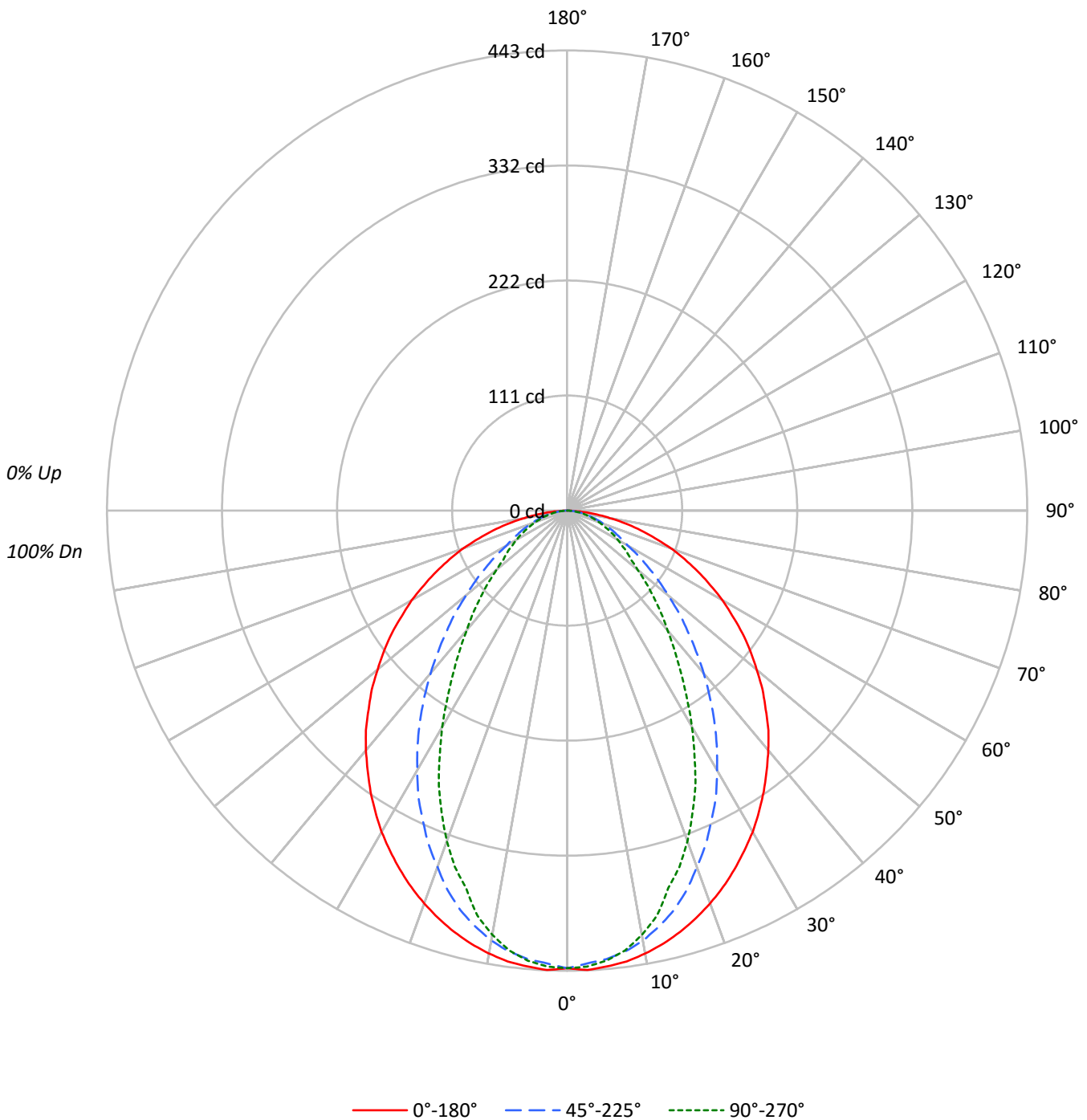
Input Watts (W): 11.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	102	99	108	104	100	97	100	97	94		96	94	91		92	90	89	87
2	102	94	88	83	99	92	87	82	89	84	80		86	82	79		83	80	77	75
3	94	84	77	71	91	83	76	71	80	74	69		77	72	68		75	71	67	65
4	87	76	68	62	84	74	67	61	72	66	61		70	64	60		68	63	59	57
5	80	69	60	54	78	67	60	54	65	59	54		64	58	53		62	57	52	50
6	75	62	54	48	73	62	54	48	60	53	48		58	52	47		57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43		54	47	43		52	47	42	41
8	65	53	45	39	64	52	44	39	51	44	39		50	43	39		48	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36		46	40	35		45	39	35	34
10	58	45	38	33	56	45	38	33	44	37	33		43	37	33		42	36	32	31

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

	0°	45°	90°
0°	13052	13052	13052
5°	13102	12891	12935
10°	13028	12645	12477
15°	12883	12206	11543
20°	12688	11512	10676
25°	12459	10753	9556
30°	12221	9874	8225
35°	11936	8927	6912
40°	11654	7914	5817
45°	11326	6868	4928
50°	10980	5850	4093
55°	10647	4938	3647
60°	10240	4006	3342
65°	9738	3583	3064
70°	9218	3231	2816
75°	8414	2908	2564
80°	7201	2542	2286
85°	5575	2142	1904



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.2	5.0
10°-20°	112.1	13.7
20°-30°	152.9	18.7
30°-40°	158.6	19.4
40°-50°	138.4	16.9
50°-60°	104.1	12.7
60°-70°	68.3	8.3
70°-80°	34.8	4.2
80°-90°	8.8	1.1
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°	306.3	37.4
0°-40°	464.8	56.7
0°-60°	707.3	86.3
0°-90°	819.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	819.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	440	440	440	440	440	
5°	440	438	433	436	435	42
15°	420	414	398	387	376	118
25°	381	366	329	301	292	176
35°	330	302	247	205	191	206
45°	270	231	164	127	118	209
55°	206	157	96	72	71	184
65°	139	87	51	45	44	138
75°	74	34	25	23	22	78
85°	16	7	6	6	6	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	440.5	440.5	440.5	440.5	440.5
2.5°	442.7	440.9	436.4	440.1	439.4
5°	440.5	438.3	433.4	436.0	434.9
7.5°	437.9	434.9	428.2	429.3	427.1
10°	433.0	429.3	420.3	418.1	414.7
12.5°	427.1	422.9	409.9	404.7	399.4
15°	420.0	414.0	397.9	386.7	376.3
17.5°	411.7	404.3	383.0	367.3	359.5
20°	402.4	392.7	365.1	346.8	338.6
22.5°	392.3	380.0	348.3	325.1	315.4
25°	381.1	365.5	328.9	301.3	292.3
27.5°	369.2	351.3	310.2	278.5	265.4
30°	357.2	334.8	288.6	253.1	240.4
32.5°	343.8	318.4	268.0	228.8	214.6
35°	330.0	301.6	246.8	205.3	191.1
37.5°	315.4	284.8	225.5	183.7	169.9
40°	301.3	266.5	204.6	162.8	150.4
42.5°	286.7	248.2	183.7	144.5	134.0
45°	270.3	231.1	163.9	127.3	117.6
47.5°	255.0	212.4	146.0	112.0	103.0
50°	238.2	194.1	126.9	97.8	88.8
52.5°	222.5	175.5	111.2	82.9	77.3
55°	206.1	156.8	95.6	72.4	70.6
57.5°	188.5	138.5	81.8	65.0	62.7
60°	172.8	120.9	67.6	58.2	56.4
62.5°	155.3	103.4	58.6	51.9	50.0
65°	138.9	86.6	51.1	45.2	43.7
67.5°	122.4	71.3	44.0	39.2	37.7
70°	106.4	56.7	37.3	33.6	32.5
72.5°	88.8	42.9	31.4	28.4	27.6
75°	73.5	33.6	25.4	23.1	22.4
77.5°	57.5	25.4	19.8	18.3	17.9
80°	42.2	18.3	14.9	13.8	13.4
82.5°	28.7	12.3	10.5	9.7	9.3
85°	16.4	6.7	6.3	5.6	5.6
87.5°	6.3	2.6	2.2	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)