

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1058421

Luminaire Tested: S122RDR-H485D940-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058421  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-57)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H485D940-X4F0-XX-UDD-BVL-W  
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

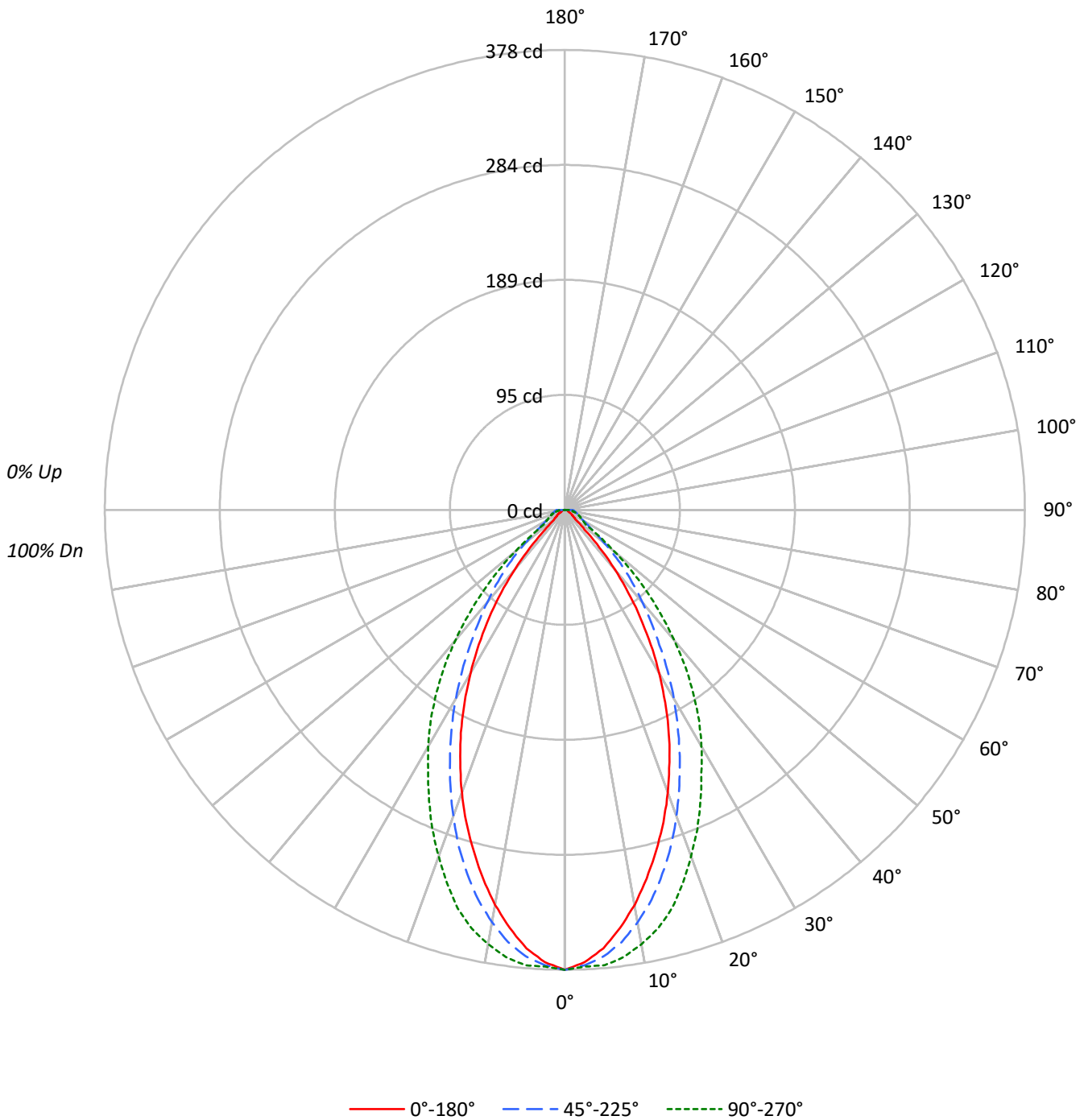
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 411.6 lumens  
Efficiency: N/A  
Efficacy: 23.7 lumens/watt  
Spacing Criteria (0/90/45): 0.78 / 0.96 / 0.91  
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.4  
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: 24 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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90				
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81				
3	98	91	85	80	96	89	84	79	86	82	78	84	80	76	81	78	75	73				
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67				
5	87	77	70	65	85	76	70	65	74	69	64	72	67	64	71	66	63	61				
6	82	72	65	60	80	71	64	59	69	63	59	68	62	58	66	62	58	56				
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52				
8	73	62	55	51	72	62	55	51	60	54	50	59	54	50	58	53	50	48				
9	69	58	52	47	68	58	51	47	57	51	47	56	50	47	55	50	46	45				
10	66	55	48	44	64	54	48	44	53	48	44	53	47	43	52	47	43	42				

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

	0°	45°	90°
0°	6977	6977	6977
5°	6702	6824	6959
10°	6178	6449	6790
15°	5536	5918	6484
20°	4858	5263	5952
25°	4115	4544	5371
30°	3300	3816	4783
35°	2440	3052	4143
40°	1530	2390	3368
45°	600	1801	2495
50°	296	1214	1527
55°	235	798	682
60°	177	646	624
65°	131	607	607
70°	162	620	620
75°	171	692	649
80°	255	903	712
85°	508	1546	1016

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 87.5°  
 Luminance: 2834 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.5	8.4
10°-20°	87.3	21.2
20°-30°	104.5	25.4
30°-40°	87.9	21.4
40°-50°	50.1	12.2
50°-60°	19.7	4.8
60°-70°	12.4	3.0
70°-80°	9.3	2.2
80°-90°	5.9	1.4
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°	226.3	55.0
0°-40°	314.2	76.3
0°-60°	384.0	93.3
0°-90°	411.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	411.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	378	378	378	378	378	
5°	362	370	368	373	376	33
15°	290	300	310	328	339	81
25°	202	211	223	246	264	92
35°	108	118	136	165	184	67
45°	23	40	69	86	96	22
55°	7	16	25	25	21	7
65°	3	14	14	13	14	3
75°	2	10	10	9	9	3
85°	2	7	7	7	5	2
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	378.1	378.1	378.1	378.1	378.1
2.5°	372.1	378.7	374.5	375.1	375.7
5°	361.8	369.6	368.4	372.7	375.7
7.5°	346.7	355.1	358.2	365.4	370.9
10°	329.7	339.4	344.2	355.7	362.4
12.5°	310.4	321.2	328.5	343.0	352.7
15°	289.8	300.1	309.8	327.9	339.4
17.5°	269.2	279.5	289.8	309.8	321.9
20°	247.4	257.1	268.0	289.2	303.1
22.5°	224.5	234.7	245.6	267.4	284.3
25°	202.1	211.1	223.2	246.2	263.8
27.5°	178.5	187.5	200.9	224.5	243.2
30°	154.9	164.0	179.1	203.3	224.5
32.5°	131.3	141.0	157.3	183.9	205.1
35°	108.3	118.0	135.5	164.6	183.9
37.5°	85.9	96.8	116.2	144.6	162.7
40°	63.5	76.2	99.2	124.6	139.8
42.5°	42.3	58.1	83.5	104.7	117.4
45°	23.0	40.5	69.0	86.5	95.6
47.5°	12.7	26.0	55.1	69.0	74.4
50°	10.3	18.1	42.3	52.6	53.2
52.5°	8.5	16.3	31.5	37.5	34.5
55°	7.3	15.7	24.8	25.4	21.2
57.5°	6.0	15.1	20.6	18.1	18.1
60°	4.8	15.1	17.5	16.3	16.9
62.5°	3.6	15.1	15.7	14.5	15.1
65°	3.0	13.9	13.9	13.3	13.9
67.5°	3.0	12.7	12.7	12.1	12.7
70°	3.0	12.1	11.5	11.5	11.5
72.5°	2.4	10.9	10.9	10.3	10.3
75°	2.4	9.7	9.7	9.1	9.1
77.5°	2.4	9.1	9.1	8.5	7.9
80°	2.4	7.9	8.5	7.9	6.7
82.5°	2.4	7.3	7.9	7.3	5.4
85°	2.4	6.7	7.3	6.7	4.8
87.5°	1.8	6.7	6.7	5.4	3.6
90°	0.0	0.0	0.0	0.0	0.0



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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	4.43	5.65	4.79	5.96	6.27	6.45	7.67	6.81	7.98	8.29
	3H	5.97	7.06	6.35	7.39	7.75	8.43	9.51	8.81	9.84	10.21
	4H	6.53	7.54	6.93	7.89	8.28	9.35	10.36	9.75	10.71	11.10
	6H	7.08	8.01	7.50	8.39	8.78	10.24	11.17	10.66	11.54	11.94
	8H	7.38	8.26	7.81	8.65	9.06	10.64	11.52	11.08	11.92	12.32
	12H	7.74	8.58	8.17	8.96	9.39	11.08	11.92	11.51	12.31	12.74
4H	2H	5.61	6.63	6.02	6.98	7.36	7.07	8.08	7.47	8.43	8.82
	3H	7.82	8.65	8.23	9.06	9.46	9.32	10.16	9.74	10.56	10.97
	4H	8.88	9.63	9.31	10.05	10.49	10.40	11.15	10.84	11.57	12.01
	6H	9.78	10.42	10.24	10.87	11.34	11.52	12.17	11.99	12.62	13.08
	8H	10.16	10.77	10.63	11.22	11.69	12.04	12.65	12.51	13.10	13.57
	12H	10.58	11.12	11.07	11.60	12.08	12.61	13.15	13.10	13.63	14.11
8H	4H	9.68	10.29	10.15	10.74	11.21	10.90	11.50	11.37	11.95	12.42
	6H	11.07	11.57	11.58	12.07	12.55	12.30	12.80	12.81	13.30	13.78
	8H	11.79	12.24	12.32	12.76	13.25	13.04	13.49	13.57	14.01	14.50
	12H	12.55	12.94	13.06	13.44	14.01	13.87	14.27	14.39	14.76	15.33
12H	4H	9.85	10.38	10.33	10.87	11.34	11.00	11.53	11.48	12.02	12.49
	6H	11.40	11.85	11.93	12.37	12.86	12.52	12.97	13.05	13.48	13.98
	8H	12.33	12.72	12.84	13.21	13.79	13.41	13.80	13.93	14.30	14.87