

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: P1058371

Luminaire Tested: S122RDR-H485D835-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058371  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H485D835-X4F0-XX-UDD-WVL-B  
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

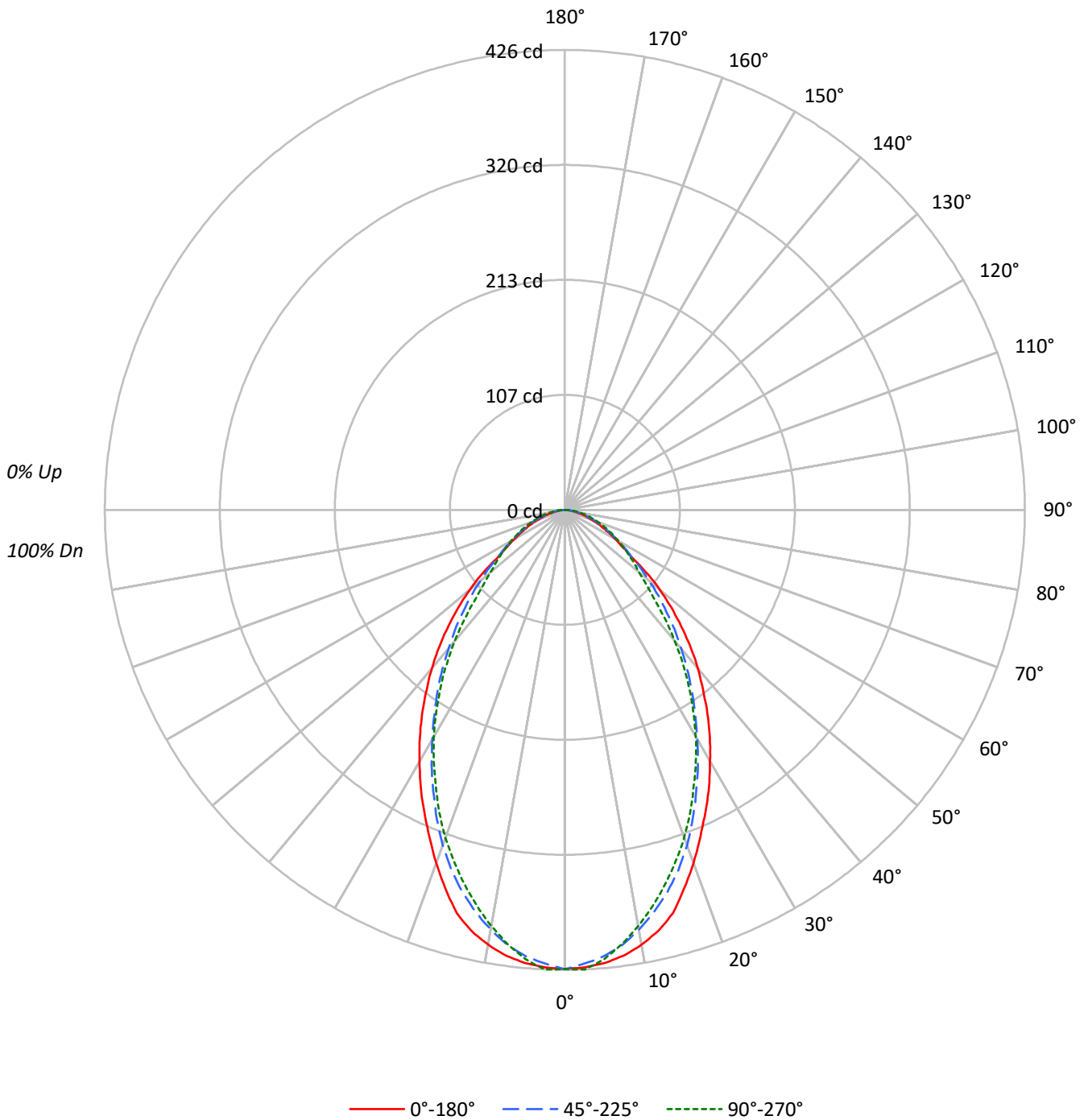
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 646.0 lumens  
Efficiency: N/A  
Efficacy: 37.1 lumens/watt  
Spacing Criteria (0/90/45): 1 / 0.92 / 1.02  
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			100	
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88	
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77			77	
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68			68	
4	89	79	71	65	87	77	70	65	75	69	64	73	68	63	71	66	63	61			61	
5	83	72	64	58	81	71	63	58	69	62	57	67	61	57	65	60	56	54			54	
6	77	66	58	52	75	65	57	52	63	56	52	61	56	51	60	55	51	49			49	
7	72	60	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	44			44	
8	68	56	48	43	66	55	48	43	54	47	43	53	47	43	52	46	42	41			41	
9	64	52	45	40	63	51	44	39	50	44	39	49	43	39	48	43	39	37			37	
10	60	48	41	36	59	48	41	36	47	41	36	46	40	36	45	40	36	34			34	

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

	0°	45°	90°
0°	7850	7850	7850
5°	7804	7691	7741
10°	7665	7399	7336
15°	7389	7001	6858
20°	6838	6492	6345
25°	6275	5862	5752
30°	5729	5224	5167
35°	5188	4622	4517
40°	4618	4030	3818
45°	3977	3466	3058
50°	3287	2917	2566
55°	2374	2419	2310
60°	1974	2074	2100
65°	1685	1803	1921
70°	1387	1608	1753
75°	1162	1355	1597
80°	861	1084	1435
85°	296	572	1291

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3977 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.3	6.1
10°-20°	103.6	16.0
20°-30°	134.0	20.7
30°-40°	131.4	20.3
40°-50°	103.5	16.0
50°-60°	67.8	10.5
60°-70°	41.3	6.4
70°-80°	20.6	3.2
80°-90°	4.4	0.7
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°	276.9	42.9
0°-40°	408.3	63.2
0°-60°	579.7	89.7
0°-90°	646.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	646.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	425	425	425	425	425	
5°	421	421	415	418	418	40
15°	387	381	366	362	359	108
25°	308	298	288	286	282	142
35°	230	217	205	205	200	144
45°	152	143	133	123	117	117
55°	74	78	75	72	72	70
65°	39	39	41	43	44	38
75°	16	17	19	22	22	17
85°	1	2	3	5	6	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	425.4	425.4	425.4	425.4	425.4
2.5°	424.0	424.7	420.6	424.7	426.1
5°	421.3	421.3	415.2	417.9	417.9
7.5°	416.6	415.9	406.4	406.4	405.7
10°	409.1	406.4	394.9	392.9	391.5
12.5°	399.6	394.9	381.4	378.0	375.9
15°	386.8	381.4	366.5	361.7	359.0
17.5°	367.8	362.4	349.5	344.1	341.4
20°	348.2	340.0	330.6	325.8	323.1
22.5°	327.8	318.4	309.6	306.2	303.5
25°	308.2	298.0	287.9	286.5	282.5
27.5°	289.2	277.0	266.9	266.2	262.8
30°	268.9	256.0	245.2	245.9	242.5
32.5°	249.9	237.8	224.9	225.6	221.5
35°	230.3	217.4	205.2	204.6	200.5
37.5°	210.0	197.8	186.3	183.6	179.5
40°	191.7	179.5	167.3	162.6	158.5
42.5°	172.1	161.2	150.4	142.9	137.5
45°	152.4	142.9	132.8	123.3	117.2
47.5°	133.4	126.0	117.2	105.7	101.6
50°	114.5	109.1	101.6	91.4	89.4
52.5°	94.8	92.8	88.1	81.3	80.6
55°	73.8	77.9	75.2	72.5	71.8
57.5°	62.3	63.0	65.0	64.3	64.3
60°	53.5	53.5	56.2	56.9	56.9
62.5°	45.4	46.1	48.8	50.1	50.1
65°	38.6	39.3	41.3	43.4	44.0
67.5°	31.8	33.2	35.2	37.3	37.9
70°	25.7	27.1	29.8	31.8	32.5
72.5°	21.0	21.7	24.4	26.4	27.1
75°	16.3	16.9	19.0	21.7	22.4
77.5°	11.5	12.9	14.9	16.9	18.3
80°	8.1	8.8	10.2	12.9	13.5
82.5°	4.7	5.4	6.8	8.8	9.5
85°	1.4	2.0	2.7	4.7	6.1
87.5°	0.0	0.0	0.0	1.4	2.7
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	13.28	14.68	13.65	14.99	15.31	13.46	14.85	13.82	15.16	15.48
	3H	14.41	15.66	14.79	15.99	16.35	14.92	16.16	15.30	16.49	16.85
	4H	14.76	15.93	15.17	16.28	16.66	15.46	16.62	15.86	16.97	17.35
	6H	14.95	16.02	15.36	16.39	16.78	15.87	16.94	16.29	17.31	17.71
	8H	14.97	15.99	15.40	16.38	16.79	16.00	17.02	16.43	17.41	17.81
	12H	14.96	15.93	15.39	16.31	16.74	16.08	17.06	16.52	17.44	17.87
4H	2H	13.74	14.90	14.14	15.25	15.63	13.88	15.05	14.28	15.40	15.78
	3H	15.08	16.04	15.49	16.44	16.84	15.56	16.51	15.97	16.92	17.32
	4H	15.52	16.38	15.96	16.80	17.24	16.22	17.08	16.66	17.50	17.94
	6H	15.79	16.54	16.25	16.98	17.45	16.76	17.50	17.22	17.94	18.41
	8H	15.84	16.53	16.30	16.98	17.45	16.93	17.62	17.39	18.07	18.53
	12H	15.83	16.45	16.32	16.93	17.40	17.05	17.66	17.53	18.14	18.62
8H	4H	15.74	16.43	16.20	16.88	17.35	16.37	17.07	16.84	17.51	17.98
	6H	16.08	16.65	16.58	17.15	17.63	17.00	17.57	17.50	18.07	18.55
	8H	16.16	16.67	16.68	17.18	17.67	17.24	17.75	17.76	18.26	18.75
	12H	16.18	16.63	16.69	17.12	17.69	17.42	17.87	17.93	18.37	18.93
12H	4H	15.75	16.36	16.23	16.84	17.32	16.36	16.97	16.84	17.46	17.93
	6H	16.11	16.62	16.63	17.13	17.62	17.00	17.51	17.52	18.02	18.51
	8H	16.22	16.67	16.74	17.17	17.74	17.27	17.72	17.79	18.22	18.79