

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



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055197

Luminaire Tested: S122R3DR-S485D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055197
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S485D830-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

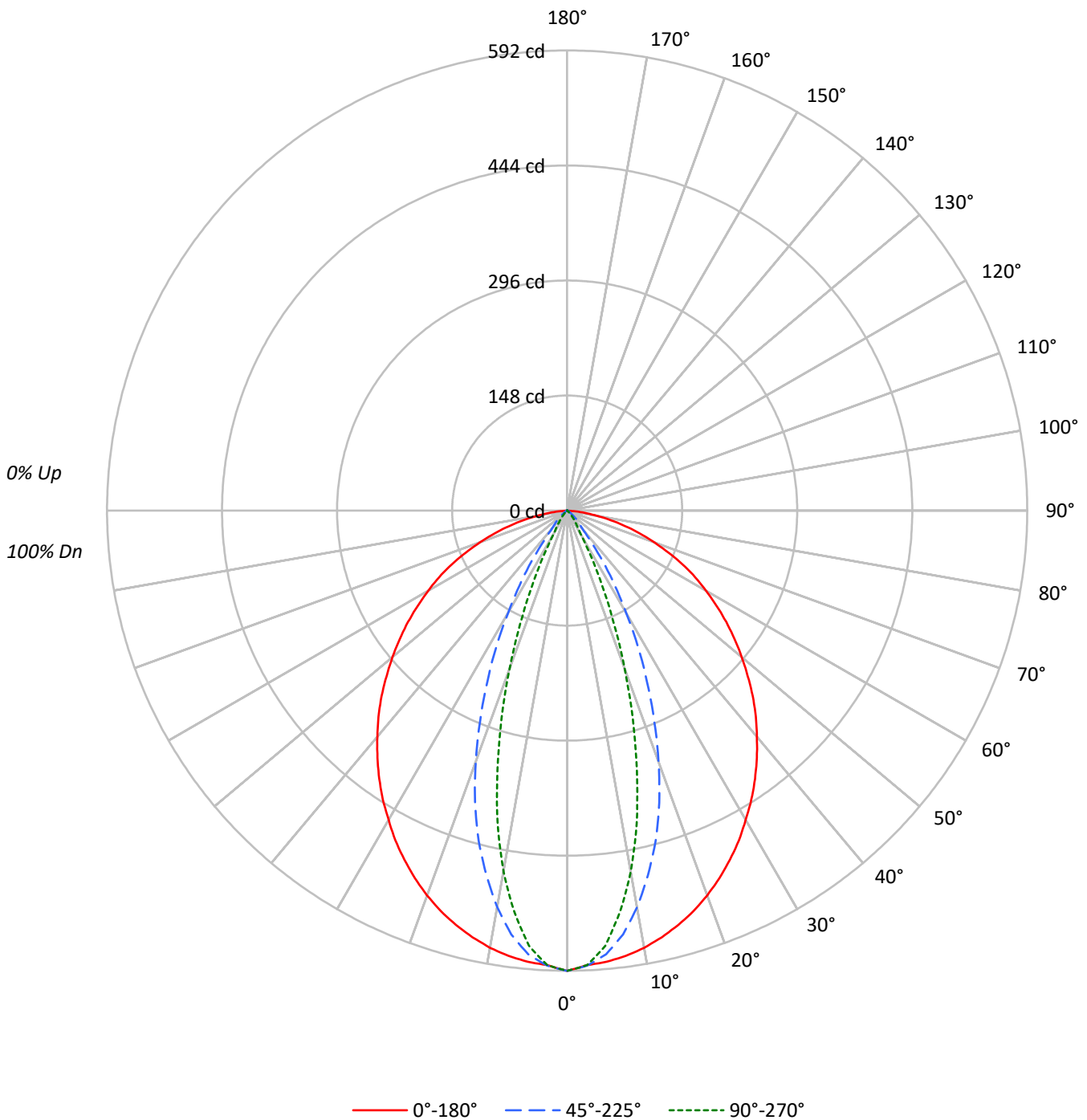
Lumens per Lamp: N/A
Luminaire Lumens: 538.8 lumens
Efficiency: N/A
Efficacy: 28.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
Input Voltage (V): 120
Input Current (A_{in}): 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	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	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81					81			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67					67			
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56					56			
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52					52			
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49					49			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45					45			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11220	11220	11220
5°	11080	10899	10692
10°	10987	9965	9075
15°	10827	8624	6796
20°	10621	6930	4351
25°	10358	5080	2235
30°	10050	3321	731
35°	9744	1841	426
40°	9393	739	235
45°	9045	493	91
50°	8648	280	41
55°	8251	135	23
60°	7813	53	0
65°	7352	31	0
70°	6597	39	0
75°	5680	51	0
80°	4310	0	0
85°	1783	152	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9045 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.1	9.9
10°-20°	123.3	22.9
20°-30°	125.2	23.2
30°-40°	94.0	17.4
40°-50°	65.8	12.2
50°-60°	40.3	7.5
60°-70°	24.0	4.5
70°-80°	11.1	2.1
80°-90°	2.0	0.4
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°	301.7	56.0
0°-40°	395.6	73.4
0°-60°	501.7	93.1
0°-90°	538.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	538.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	592	592	592	592	592	
5°	583	588	573	562	562	55
15°	552	522	440	372	346	156
25°	496	408	243	139	107	228
35°	421	274	80	24	18	263
45°	338	145	18	5	3	260
55°	250	44	4	1	1	223
65°	164	13	1	1	0	162
75°	78	1	1	1	0	82
85°	8	0	1	1	0	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	592.2	592.2	592.2	592.2	592.2
2.5°	585.4	594.2	586.0	584.7	585.4
5°	582.6	588.1	573.1	562.2	562.2
7.5°	577.9	577.9	550.0	527.5	520.7
10°	571.1	563.6	518.0	481.9	471.7
12.5°	562.2	544.5	480.5	429.5	413.2
15°	552.0	522.1	439.7	372.3	346.5
17.5°	540.4	496.9	394.1	310.4	280.4
20°	526.8	469.7	343.7	247.1	215.8
22.5°	511.9	439.7	292.7	190.6	157.2
25°	495.5	408.4	243.0	138.9	106.9
27.5°	478.5	375.7	197.4	95.3	65.3
30°	459.4	341.7	151.8	56.5	33.4
32.5°	441.1	309.0	113.7	30.6	24.5
35°	421.3	274.3	79.6	23.8	18.4
37.5°	400.9	241.6	49.0	17.7	13.6
40°	379.8	208.3	29.9	12.9	9.5
42.5°	359.4	177.0	23.8	8.8	6.1
45°	337.6	145.0	18.4	5.4	3.4
47.5°	315.1	115.7	13.6	3.4	2.0
50°	293.4	89.8	9.5	2.0	1.4
52.5°	271.6	66.0	6.1	1.4	0.7
55°	249.8	44.2	4.1	1.4	0.7
57.5°	228.0	31.3	2.7	0.7	0.7
60°	206.2	24.5	1.4	0.7	0.0
62.5°	185.8	19.1	1.4	0.7	0.7
65°	164.0	12.9	0.7	0.7	0.0
67.5°	140.9	8.2	0.7	0.7	0.0
70°	119.1	4.8	0.7	0.7	0.0
72.5°	98.0	2.7	0.7	0.7	0.0
75°	77.6	1.4	0.7	0.7	0.0
77.5°	57.9	0.7	0.0	0.7	0.0
80°	39.5	0.0	0.0	0.7	0.0
82.5°	23.1	0.0	0.0	0.7	0.0
85°	8.2	0.0	0.7	0.7	0.0
87.5°	0.0	0.0	0.7	0.7	0.0
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	14.61	15.87	14.97	16.18	16.50	0.00	0.00	0.00	0.00	0.00
	3H	18.35	19.47	18.73	19.80	20.17	0.00	0.00	0.00	0.00	0.00
	4H	19.66	20.70	20.07	21.06	21.44	0.00	0.00	0.00	0.00	0.00
	6H	20.52	21.48	20.94	21.85	22.24	0.00	0.00	0.00	0.00	0.00
	8H	20.73	21.64	21.16	22.03	22.43	0.00	0.00	0.00	0.00	0.00
	12H	20.80	21.66	21.23	22.04	22.47	0.00	0.00	0.00	0.00	0.00
4H	2H	14.36	15.40	14.77	15.76	16.14	0.00	0.00	0.00	0.00	0.00
	3H	18.11	18.96	18.52	19.36	19.77	0.00	0.00	0.00	0.00	0.00
	4H	19.40	20.16	19.84	20.58	21.03	0.00	0.00	0.00	0.00	0.00
	6H	20.32	20.98	20.79	21.43	21.89	0.00	0.00	0.00	0.00	0.00
	8H	20.58	21.19	21.05	21.64	22.11	0.00	0.00	0.00	0.00	0.00
	12H	20.68	21.22	21.17	21.70	22.18	0.00	0.00	0.00	0.00	0.00
8H	4H	19.26	19.87	19.73	20.32	20.79	0.00	0.00	0.00	0.00	0.00
	6H	20.16	20.66	20.66	21.15	21.64	0.00	0.00	0.00	0.00	0.00
	8H	20.42	20.86	20.94	21.38	21.87	0.00	0.00	0.00	0.00	0.00
	12H	20.53	20.92	21.05	21.42	21.99	0.00	0.00	0.00	0.00	0.00
12H	4H	19.21	19.75	19.70	20.23	20.71	0.00	0.00	0.00	0.00	0.00
	6H	20.10	20.54	20.62	21.06	21.55	0.00	0.00	0.00	0.00	0.00
	8H	20.37	20.76	20.89	21.26	21.83	0.00	0.00	0.00	0.00	0.00