

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: P1055380

Luminaire Tested: S122R3DR-H675D940-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055380
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-H675D940-X4F0-XX-UDD-FLL-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

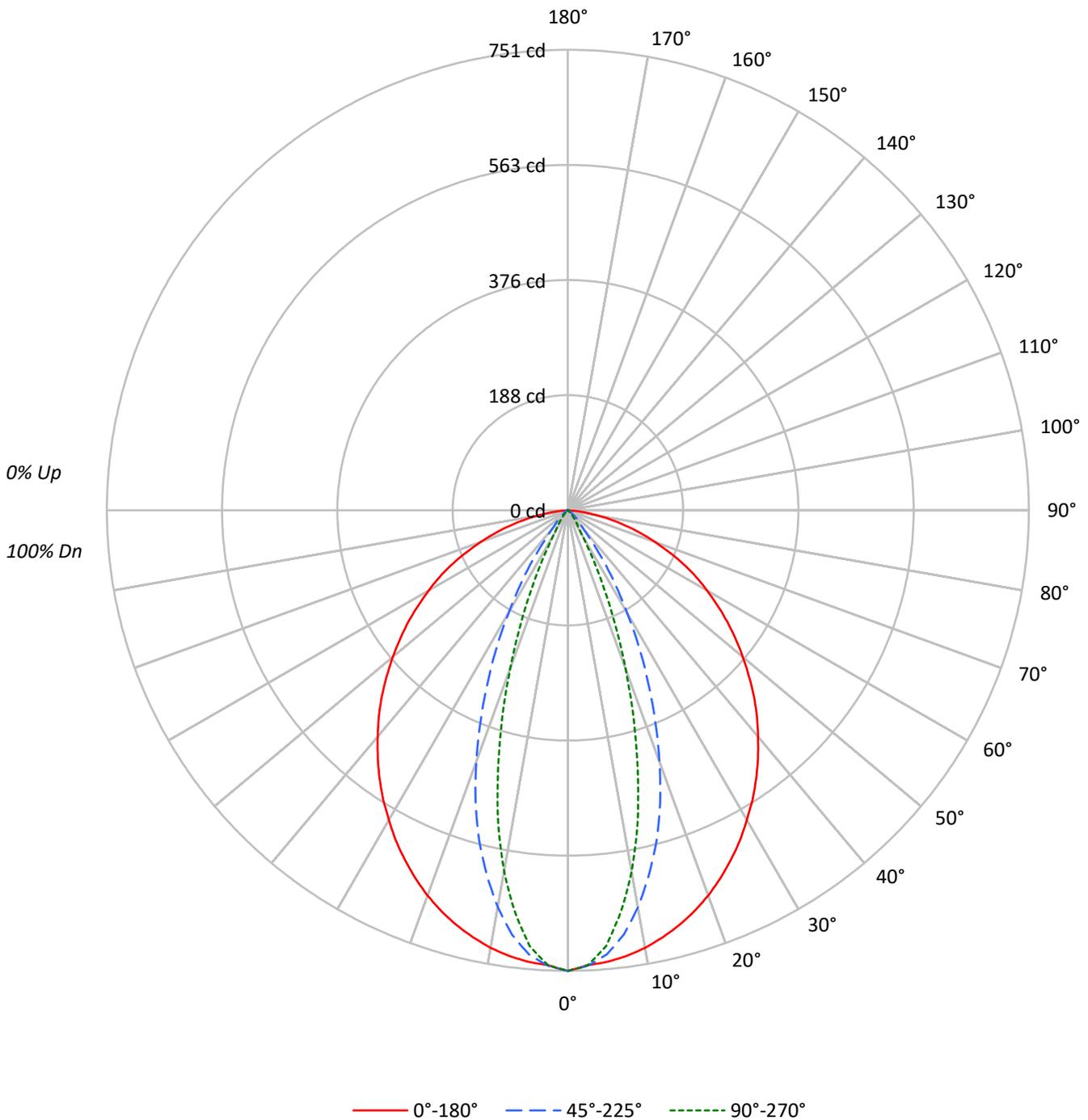
Lumens per Lamp: N/A
Luminaire Lumens: 683.5 lumens
Efficiency: N/A
Efficacy: 28.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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°	14234	14234	14234
5°	14058	13828	13566
10°	13938	12641	11512
15°	13736	10941	8620
20°	13476	8793	5518
25°	13141	6445	2835
30°	12752	4213	925
35°	12362	2336	539
40°	11916	940	299
45°	11476	624	115
50°	10970	357	50
55°	10468	172	30
60°	9912	64	0
65°	9329	40	0
70°	8370	50	0
75°	7203	66	0
80°	5466	0	0
85°	2261	196	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11476 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.4	9.9
10°-20°	156.5	22.9
20°-30°	158.9	23.2
30°-40°	119.2	17.4
40°-50°	83.5	12.2
50°-60°	51.1	7.5
60°-70°	30.4	4.5
70°-80°	14.0	2.1
80°-90°	2.5	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°	382.7	56.0
0°-40°	501.9	73.4
0°-60°	636.5	93.1
0°-90°	683.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	683.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	751	751	751	751	751	
5°	739	746	727	713	713	70
15°	700	662	558	472	440	197
25°	629	518	308	176	136	289
35°	534	348	101	30	23	334
45°	428	184	23	7	4	330
55°	317	56	5	2	1	283
65°	208	16	1	1	0	205
75°	98	2	1	1	0	105
85°	10	0	1	1	0	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	751.3	751.3	751.3	751.3	751.3
2.5°	742.6	753.8	743.5	741.8	742.6
5°	739.2	746.1	727.1	713.3	713.3
7.5°	733.1	733.1	697.7	669.2	660.6
10°	724.5	715.0	657.1	611.4	598.4
12.5°	713.3	690.8	609.6	544.9	524.2
15°	700.3	662.3	557.8	472.3	439.5
17.5°	685.6	630.4	500.0	393.8	355.8
20°	668.4	595.8	436.1	313.5	273.7
22.5°	649.4	557.8	371.3	241.8	199.5
25°	628.6	518.1	308.3	176.2	135.6
27.5°	607.0	476.7	250.4	120.9	82.9
30°	582.9	433.5	192.6	71.7	42.3
32.5°	559.6	392.0	144.2	38.9	31.1
35°	534.5	348.0	101.0	30.2	23.3
37.5°	508.6	306.5	62.2	22.5	17.3
40°	481.8	264.2	38.0	16.4	12.1
42.5°	455.9	224.5	30.2	11.2	7.8
45°	428.3	183.9	23.3	6.9	4.3
47.5°	399.8	146.8	17.3	4.3	2.6
50°	372.2	114.0	12.1	2.6	1.7
52.5°	344.5	83.8	7.8	1.7	0.9
55°	316.9	56.1	5.2	1.7	0.9
57.5°	289.3	39.7	3.5	0.9	0.9
60°	261.6	31.1	1.7	0.9	0.0
62.5°	235.7	24.2	1.7	0.9	0.9
65°	208.1	16.4	0.9	0.9	0.0
67.5°	178.7	10.4	0.9	0.9	0.0
70°	151.1	6.0	0.9	0.9	0.0
72.5°	124.3	3.5	0.9	0.9	0.0
75°	98.4	1.7	0.9	0.9	0.0
77.5°	73.4	0.9	0.0	0.9	0.0
80°	50.1	0.0	0.0	0.9	0.0
82.5°	29.4	0.0	0.0	0.9	0.0
85°	10.4	0.0	0.9	0.9	0.0
87.5°	0.0	0.0	0.9	0.9	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	15.44	16.70	15.80	17.01	17.32	0.00	0.00	0.00	0.00	0.00
	3H	19.18	20.30	19.56	20.63	20.99	0.00	0.00	0.00	0.00	0.00
	4H	20.49	21.53	20.89	21.88	22.26	0.00	0.00	0.00	0.00	0.00
	6H	21.34	22.30	21.76	22.67	23.06	0.00	0.00	0.00	0.00	0.00
	8H	21.56	22.46	21.99	22.85	23.26	0.00	0.00	0.00	0.00	0.00
	12H	21.62	22.49	22.06	22.87	23.30	0.00	0.00	0.00	0.00	0.00
4H	2H	15.19	16.23	15.59	16.58	16.97	0.00	0.00	0.00	0.00	0.00
	3H	18.93	19.78	19.35	20.19	20.59	0.00	0.00	0.00	0.00	0.00
	4H	20.23	20.99	20.66	21.41	21.85	0.00	0.00	0.00	0.00	0.00
	6H	21.15	21.80	21.61	22.25	22.72	0.00	0.00	0.00	0.00	0.00
	8H	21.41	22.02	21.88	22.47	22.94	0.00	0.00	0.00	0.00	0.00
	12H	21.51	22.05	22.00	22.53	23.01	0.00	0.00	0.00	0.00	0.00
8H	4H	20.08	20.69	20.55	21.14	21.61	0.00	0.00	0.00	0.00	0.00
	6H	20.98	21.48	21.49	21.98	22.46	0.00	0.00	0.00	0.00	0.00
	8H	21.24	21.69	21.77	22.20	22.70	0.00	0.00	0.00	0.00	0.00
	12H	21.36	21.75	21.88	22.25	22.82	0.00	0.00	0.00	0.00	0.00
12H	4H	20.03	20.57	20.52	21.06	21.53	0.00	0.00	0.00	0.00	0.00
	6H	20.92	21.36	21.44	21.88	22.37	0.00	0.00	0.00	0.00	0.00
	8H	21.20	21.59	21.71	22.08	22.66	0.00	0.00	0.00	0.00	0.00