

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: P1055677

Luminaire Tested: S123R3DR-S775D940-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055677  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S775D940-X4F0-XX-UDD-F-B  
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

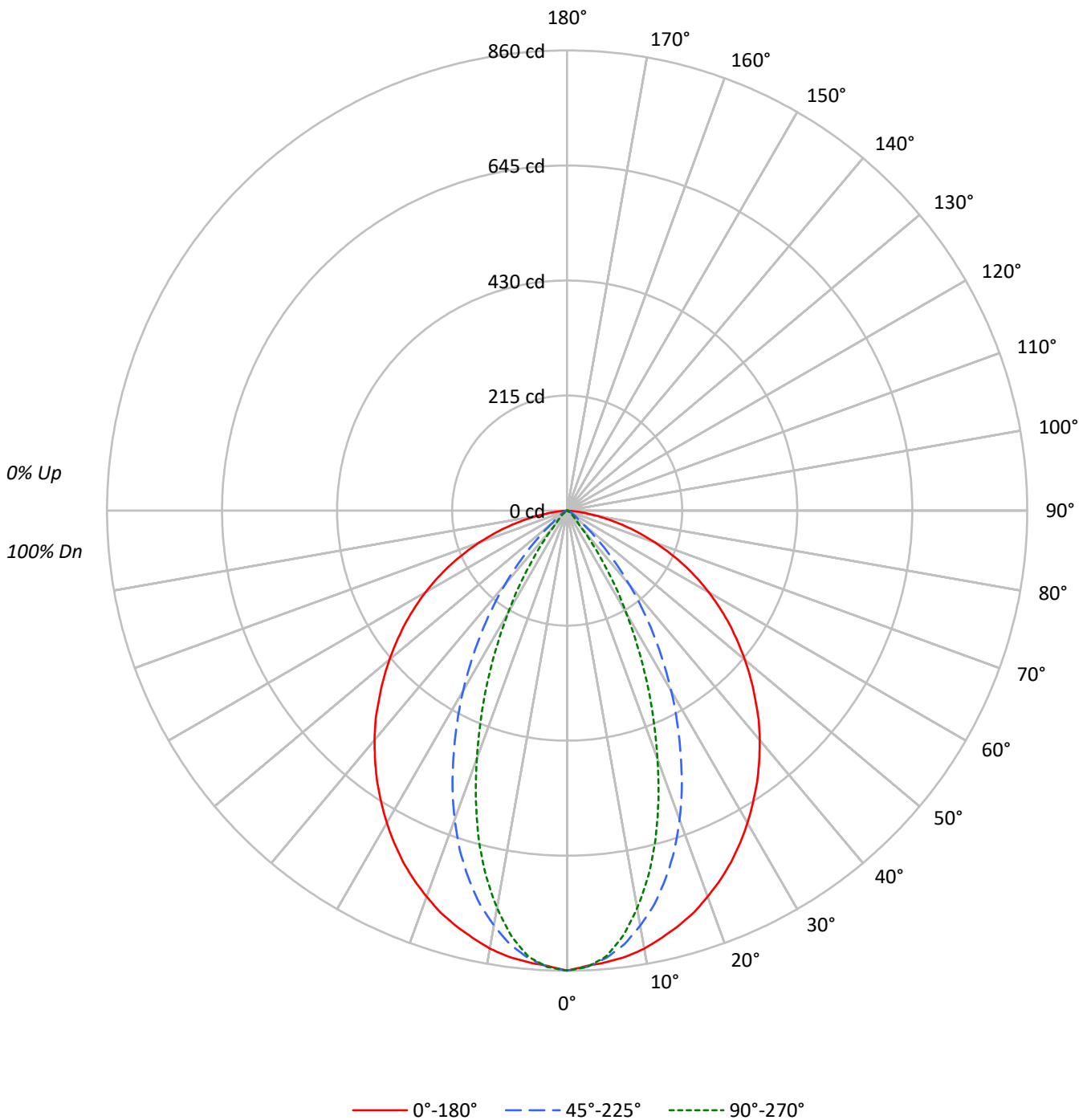
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1006.1 lumens  
Efficiency: N/A  
Efficacy: 38.1 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.4  
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: 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	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	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	57	79	69	62	57	67	61	57	66	61	56	64	60	56	54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

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

	0°	45°	90°
0°	10364	10364	10364
5°	10252	10155	10122
10°	10175	9640	9236
15°	10028	8882	7958
20°	9851	7883	6338
25°	9645	6678	4673
30°	9385	5413	3067
35°	9108	4121	1679
40°	8814	2849	576
45°	8469	1657	334
50°	8129	653	201
55°	7779	412	95
60°	7376	258	43
65°	6870	128	26
70°	6162	63	32
75°	5236	42	42
80°	3902	62	0
85°	1480	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8469 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.8	7.8
10°-20°	200.0	19.9
20°-30°	238.6	23.7
30°-40°	202.4	20.1
40°-50°	137.6	13.7
50°-60°	85.3	8.5
60°-70°	43.2	4.3
70°-80°	17.6	1.8
80°-90°	2.7	0.3
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°	517.4	51.4
0°-40°	719.8	71.5
0°-60°	942.6	93.7
0°-90°	1006.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1006.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	860	860	860	860	860	
5°	847	855	839	833	836	80
15°	803	783	712	655	638	226
25°	725	657	502	388	351	334
35°	619	497	280	151	114	387
45°	497	326	97	24	20	384
55°	370	164	20	7	4	331
65°	241	40	4	1	1	238
75°	112	7	1	1	1	119
85°	11	0	0	1	0	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	859.6	859.6	859.6	859.6	859.6
2.5°	851.6	863.2	853.4	852.5	853.4
5°	847.1	855.1	839.1	832.9	836.4
7.5°	840.9	844.4	817.7	801.6	801.6
10°	831.1	828.4	787.4	760.6	754.4
12.5°	817.7	807.0	753.5	711.6	700.0
15°	803.4	782.9	711.6	655.4	637.6
17.5°	787.4	756.2	666.1	593.0	567.1
20°	767.8	725.9	614.4	525.2	494.0
22.5°	747.3	692.9	560.0	455.7	420.9
25°	725.0	657.2	502.0	387.9	351.3
27.5°	700.0	619.7	445.0	322.8	282.7
30°	674.1	580.5	388.8	260.4	220.3
32.5°	646.5	539.5	332.6	203.3	165.9
35°	618.8	496.7	280.0	150.7	114.1
37.5°	589.4	453.9	229.2	104.3	72.2
40°	560.0	412.0	181.0	66.0	36.6
42.5°	529.7	368.3	137.3	33.0	25.0
45°	496.7	325.5	97.2	24.1	19.6
47.5°	465.5	284.5	64.2	19.6	15.2
50°	433.4	243.4	34.8	14.3	10.7
52.5°	401.3	204.2	25.0	10.7	7.1
55°	370.1	164.1	19.6	7.1	4.5
57.5°	338.0	129.3	15.2	4.5	2.7
60°	305.9	95.4	10.7	2.7	1.8
62.5°	273.8	66.0	7.1	1.8	0.9
65°	240.8	40.1	4.5	0.9	0.9
67.5°	206.9	27.6	2.7	0.9	0.9
70°	174.8	19.6	1.8	0.9	0.9
72.5°	142.7	12.5	0.9	0.9	0.0
75°	112.4	7.1	0.9	0.9	0.9
77.5°	82.9	2.7	0.9	0.9	0.0
80°	56.2	0.9	0.9	0.9	0.0
82.5°	31.2	0.0	0.9	0.9	0.0
85°	10.7	0.0	0.0	0.9	0.0
87.5°	0.0	0.0	0.0	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	17.17	18.45	17.54	18.77	19.08	0.00	0.00	0.00	0.00	0.00
	3H	19.12	20.25	19.50	20.58	20.95	0.00	0.00	0.00	0.00	0.00
	4H	19.94	21.00	20.35	21.35	21.74	0.00	0.00	0.00	0.00	0.00
	6H	20.50	21.47	20.91	21.84	22.23	0.00	0.00	0.00	0.00	0.00
	8H	20.62	21.54	21.05	21.93	22.34	0.00	0.00	0.00	0.00	0.00
	12H	20.65	21.52	21.08	21.91	22.34	0.00	0.00	0.00	0.00	0.00
4H	2H	16.94	17.99	17.34	18.34	18.73	0.00	0.00	0.00	0.00	0.00
	3H	18.89	19.75	19.30	20.16	20.56	0.00	0.00	0.00	0.00	0.00
	4H	19.70	20.47	20.14	20.89	21.34	0.00	0.00	0.00	0.00	0.00
	6H	20.30	20.97	20.77	21.41	21.88	0.00	0.00	0.00	0.00	0.00
	8H	20.46	21.07	20.93	21.52	21.99	0.00	0.00	0.00	0.00	0.00
	12H	20.50	21.05	20.99	21.53	22.00	0.00	0.00	0.00	0.00	0.00
8H	4H	19.56	20.18	20.03	20.63	21.10	0.00	0.00	0.00	0.00	0.00
	6H	20.14	20.64	20.65	21.14	21.62	0.00	0.00	0.00	0.00	0.00
	8H	20.29	20.74	20.81	21.26	21.75	0.00	0.00	0.00	0.00	0.00
	12H	20.35	20.74	20.86	21.24	21.81	0.00	0.00	0.00	0.00	0.00
12H	4H	19.51	20.06	20.00	20.54	21.01	0.00	0.00	0.00	0.00	0.00
	6H	20.08	20.53	20.60	21.05	21.54	0.00	0.00	0.00	0.00	0.00
	8H	20.25	20.64	20.76	21.14	21.71	0.00	0.00	0.00	0.00	0.00