

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: P1055662

Luminaire Tested: S123R3DR-S775D840-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055662  
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-S775D840-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, 80 CRI LEDS  
Ballast/Driver: -

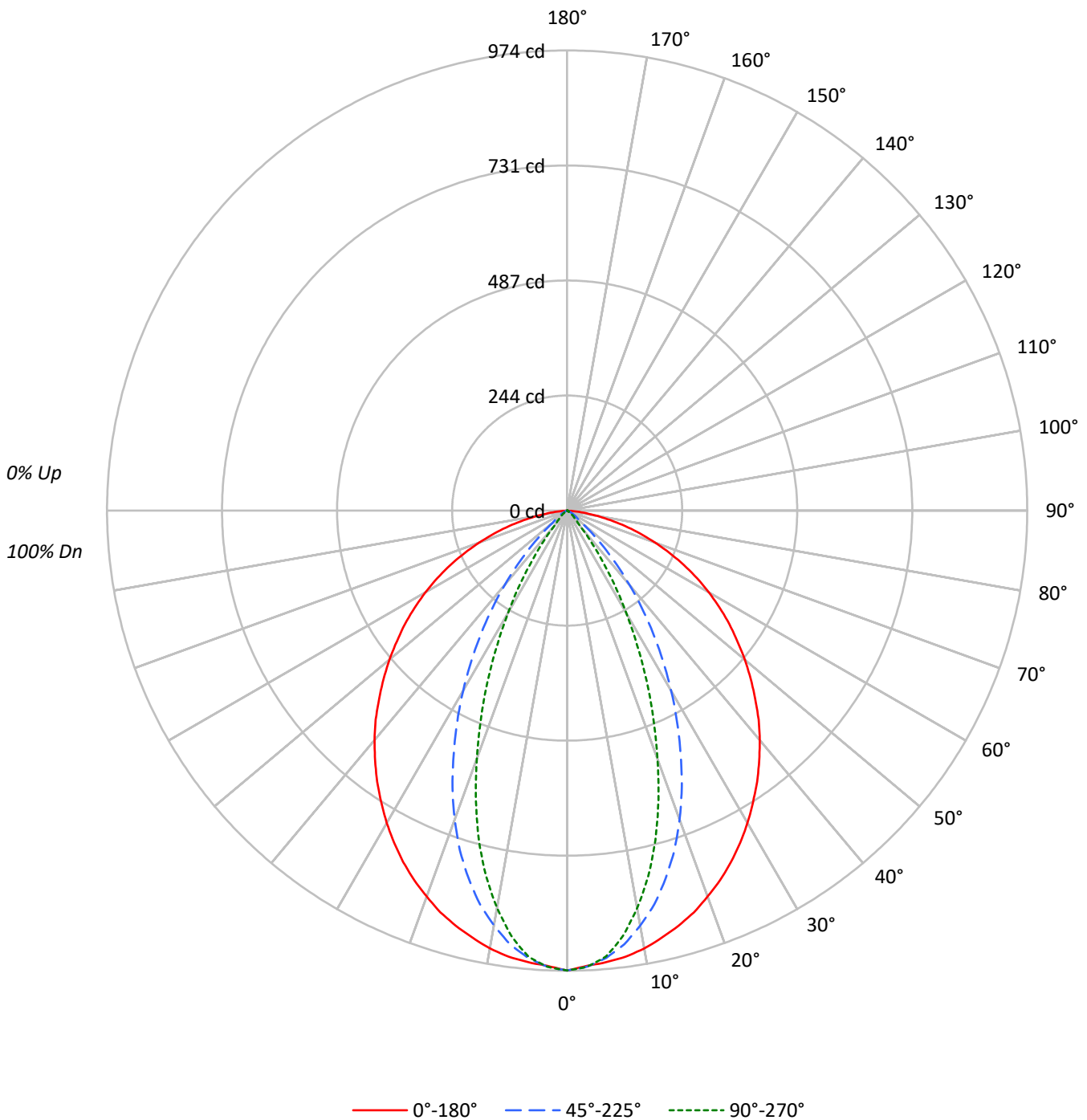
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1139.4 lumens  
Efficiency: N/A  
Efficacy: 43.2 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	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	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90					90			
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81					81			
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73					73			
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65					65			
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59					59			
6	81	70	63	58	79	69	62	57	67	61	57	66	61	56	64	60	56	54					54			
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50					50			
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46					46			
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43					43			
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40					40			

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

	0°	45°	90°
0°	11737	11737	11737
5°	11611	11501	11465
10°	11523	10917	10459
15°	11357	10059	9013
20°	11156	8927	7178
25°	10922	7564	5293
30°	10629	6130	3472
35°	10314	4667	1903
40°	9981	3226	652
45°	9591	1877	379
50°	9206	739	227
55°	8809	467	105
60°	8353	292	48
65°	7780	143	29
70°	6976	71	35
75°	5925	47	47
80°	4416	69	0
85°	1674	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9591 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.3	7.8
10°-20°	226.5	19.9
20°-30°	270.2	23.7
30°-40°	229.2	20.1
40°-50°	155.8	13.7
50°-60°	96.5	8.5
60°-70°	48.9	4.3
70°-80°	19.9	1.7
80°-90°	3.1	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°	586.0	51.4
0°-40°	815.2	71.5
0°-60°	1067.5	93.7
0°-90°	1139.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1139.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	974	974	974	974	974	
5°	959	968	950	943	947	91
15°	910	887	806	742	722	256
25°	821	744	569	439	398	378
35°	701	562	317	171	129	438
45°	562	369	110	27	22	434
55°	419	186	22	8	5	374
65°	273	45	5	1	1	269
75°	127	8	1	1	1	135
85°	12	0	0	1	0	22
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	973.5	973.5	973.5	973.5	973.5
2.5°	964.4	977.5	966.4	965.4	966.4
5°	959.4	968.5	950.3	943.2	947.3
7.5°	952.3	956.3	926.0	907.9	907.9
10°	941.2	938.2	891.7	861.4	854.3
12.5°	926.0	913.9	853.3	805.9	792.7
15°	909.9	886.7	805.9	742.2	722.1
17.5°	891.7	856.4	754.4	671.6	642.3
20°	869.5	822.0	695.8	594.8	559.5
22.5°	846.3	784.7	634.2	516.0	476.7
25°	821.0	744.3	568.6	439.3	397.9
27.5°	792.7	701.9	503.9	365.6	320.1
30°	763.5	657.4	440.3	294.9	249.4
32.5°	732.2	611.0	376.7	230.2	187.8
35°	700.8	562.5	317.1	170.7	129.3
37.5°	667.5	514.0	259.5	118.2	81.8
40°	634.2	466.6	205.0	74.7	41.4
42.5°	599.9	417.1	155.5	37.4	28.3
45°	562.5	368.6	110.1	27.3	22.2
47.5°	527.1	322.1	72.7	22.2	17.2
50°	490.8	275.7	39.4	16.2	12.1
52.5°	454.4	231.3	28.3	12.1	8.1
55°	419.1	185.8	22.2	8.1	5.0
57.5°	382.7	146.4	17.2	5.0	3.0
60°	346.4	108.1	12.1	3.0	2.0
62.5°	310.0	74.7	8.1	2.0	1.0
65°	272.7	45.4	5.0	1.0	1.0
67.5°	234.3	31.3	3.0	1.0	1.0
70°	197.9	22.2	2.0	1.0	1.0
72.5°	161.6	14.1	1.0	1.0	0.0
75°	127.2	8.1	1.0	1.0	1.0
77.5°	93.9	3.0	1.0	1.0	0.0
80°	63.6	1.0	1.0	1.0	0.0
82.5°	35.3	0.0	1.0	1.0	0.0
85°	12.1	0.0	0.0	1.0	0.0
87.5°	0.0	0.0	0.0	1.0	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	17.60	18.88	17.97	19.20	19.51	0.00	0.00	0.00	0.00	0.00
	3H	19.55	20.68	19.93	21.01	21.38	0.00	0.00	0.00	0.00	0.00
	4H	20.38	21.43	20.78	21.78	22.17	0.00	0.00	0.00	0.00	0.00
	6H	20.93	21.90	21.34	22.27	22.66	0.00	0.00	0.00	0.00	0.00
	8H	21.06	21.97	21.49	22.36	22.77	0.00	0.00	0.00	0.00	0.00
	12H	21.08	21.96	21.51	22.34	22.77	0.00	0.00	0.00	0.00	0.00
4H	2H	17.37	18.42	17.77	18.77	19.16	0.00	0.00	0.00	0.00	0.00
	3H	19.32	20.18	19.73	20.59	20.99	0.00	0.00	0.00	0.00	0.00
	4H	20.13	20.90	20.57	21.32	21.77	0.00	0.00	0.00	0.00	0.00
	6H	20.73	21.40	21.20	21.84	22.31	0.00	0.00	0.00	0.00	0.00
	8H	20.89	21.50	21.36	21.95	22.42	0.00	0.00	0.00	0.00	0.00
	12H	20.93	21.48	21.42	21.96	22.44	0.00	0.00	0.00	0.00	0.00
8H	4H	19.99	20.61	20.46	21.06	21.53	0.00	0.00	0.00	0.00	0.00
	6H	20.57	21.07	21.08	21.57	22.05	0.00	0.00	0.00	0.00	0.00
	8H	20.72	21.17	21.25	21.69	22.18	0.00	0.00	0.00	0.00	0.00
	12H	20.78	21.17	21.30	21.67	22.24	0.00	0.00	0.00	0.00	0.00
12H	4H	19.94	20.49	20.43	20.97	21.45	0.00	0.00	0.00	0.00	0.00
	6H	20.51	20.96	21.03	21.48	21.97	0.00	0.00	0.00	0.00	0.00
	8H	20.68	21.07	21.19	21.57	22.14	0.00	0.00	0.00	0.00	0.00