

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: P1055668

Luminaire Tested: S123R3DR-S775D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055668
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-S775D927-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

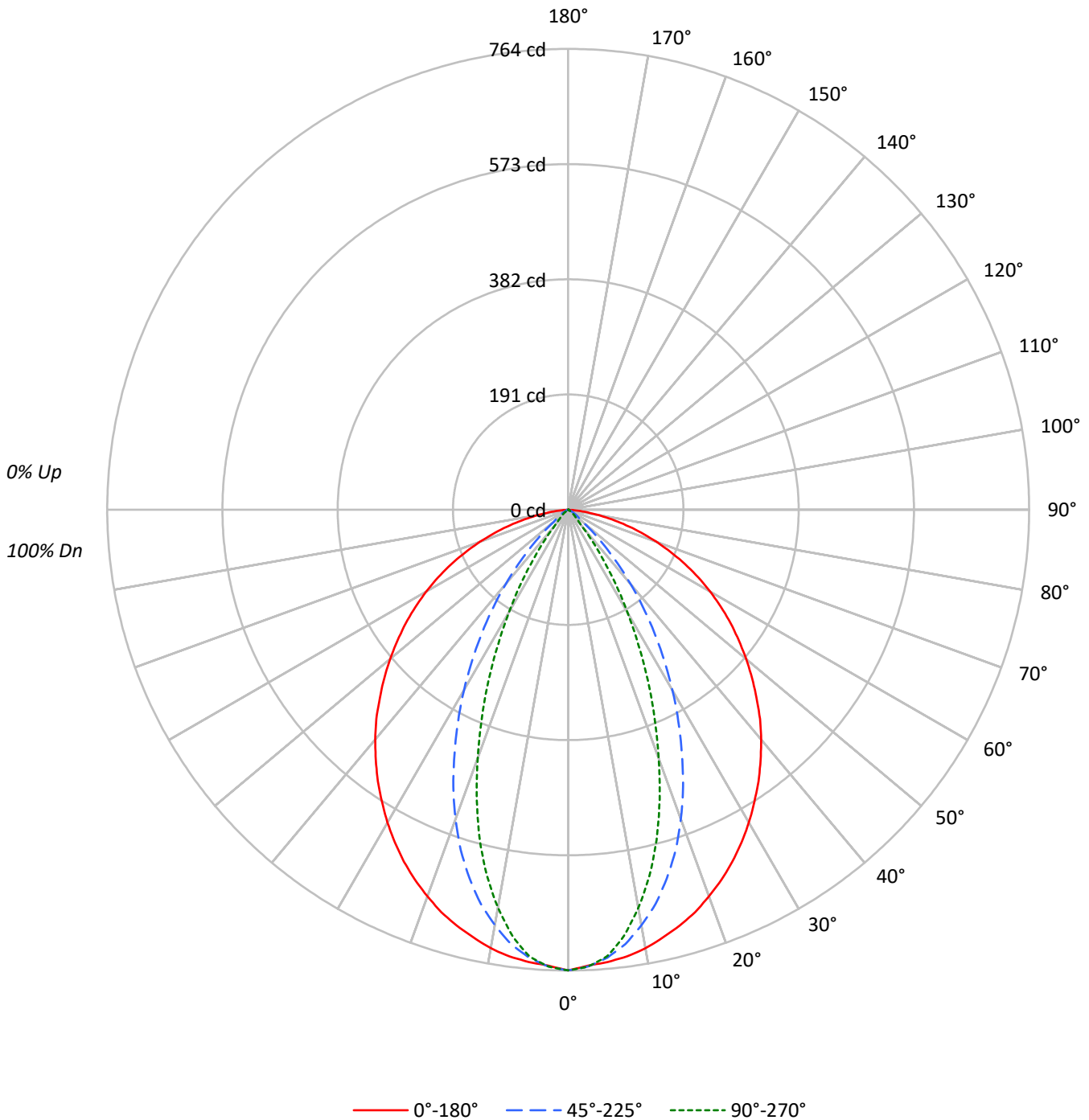
Lumens per Lamp: N/A
Luminaire Lumens: 893.8 lumens
Efficiency: N/A
Efficacy: 33.9 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (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	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°	9207	9207	9207
5°	9108	9021	8993
10°	9039	8564	8205
15°	8909	7891	7070
20°	8751	7003	5631
25°	8567	5933	4152
30°	8338	4808	2724
35°	8092	3660	1492
40°	7830	2531	512
45°	7523	1471	297
50°	7221	580	178
55°	6911	366	84
60°	6551	229	39
65°	6102	114	23
70°	5474	56	28
75°	4649	37	37
80°	3465	56	0
85°	1314	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7523 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.0	7.8
10°-20°	177.7	19.9
20°-30°	211.9	23.7
30°-40°	179.8	20.1
40°-50°	122.2	13.7
50°-60°	75.7	8.5
60°-70°	38.4	4.3
70°-80°	15.6	1.8
80°-90°	2.4	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°	459.7	51.4
0°-40°	639.4	71.5
0°-60°	837.4	93.7
0°-90°	893.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	893.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	764	764	764	764	764	
5°	753	760	745	740	743	71
15°	714	696	632	582	566	201
25°	644	584	446	345	312	296
35°	550	441	249	134	101	344
45°	441	289	86	21	17	341
55°	329	146	17	6	4	294
65°	214	36	4	1	1	211
75°	100	6	1	1	1	106
85°	10	0	0	1	0	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	763.7	763.7	763.7	763.7	763.7
2.5°	756.5	766.8	758.1	757.3	758.1
5°	752.6	759.7	745.4	739.9	743.1
7.5°	747.0	750.2	726.4	712.2	712.2
10°	738.3	735.9	699.5	675.7	670.2
12.5°	726.4	716.9	669.4	632.2	621.9
15°	713.8	695.5	632.2	582.3	566.4
17.5°	699.5	671.8	591.8	526.8	503.8
20°	682.1	644.8	545.8	466.6	438.9
22.5°	663.8	615.5	497.5	404.8	373.9
25°	644.0	583.8	446.0	344.6	312.1
27.5°	621.9	550.6	395.3	286.8	251.1
30°	598.9	515.7	345.4	231.3	195.7
32.5°	574.3	479.3	295.5	180.6	147.3
35°	549.8	441.2	248.7	133.9	101.4
37.5°	523.6	403.2	203.6	92.7	64.2
40°	497.5	366.0	160.8	58.6	32.5
42.5°	470.6	327.2	122.0	29.3	22.2
45°	441.2	289.1	86.3	21.4	17.4
47.5°	413.5	252.7	57.0	17.4	13.5
50°	385.0	216.3	30.9	12.7	9.5
52.5°	356.5	181.4	22.2	9.5	6.3
55°	328.8	145.8	17.4	6.3	4.0
57.5°	300.2	114.9	13.5	4.0	2.4
60°	271.7	84.8	9.5	2.4	1.6
62.5°	243.2	58.6	6.3	1.6	0.8
65°	213.9	35.6	4.0	0.8	0.8
67.5°	183.8	24.6	2.4	0.8	0.8
70°	155.3	17.4	1.6	0.8	0.8
72.5°	126.7	11.1	0.8	0.8	0.0
75°	99.8	6.3	0.8	0.8	0.8
77.5°	73.7	2.4	0.8	0.8	0.0
80°	49.9	0.8	0.8	0.8	0.0
82.5°	27.7	0.0	0.8	0.8	0.0
85°	9.5	0.0	0.0	0.8	0.0
87.5°	0.0	0.0	0.0	0.8	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	16.76	18.04	17.13	18.35	18.67	0.00	0.00	0.00	0.00	0.00
	3H	18.71	19.84	19.09	20.17	20.54	0.00	0.00	0.00	0.00	0.00
	4H	19.53	20.59	19.94	20.94	21.32	0.00	0.00	0.00	0.00	0.00
	6H	20.09	21.06	20.50	21.43	21.82	0.00	0.00	0.00	0.00	0.00
	8H	20.21	21.13	20.64	21.52	21.93	0.00	0.00	0.00	0.00	0.00
	12H	20.24	21.11	20.67	21.50	21.93	0.00	0.00	0.00	0.00	0.00
4H	2H	16.53	17.58	16.93	17.93	18.32	0.00	0.00	0.00	0.00	0.00
	3H	18.48	19.34	18.89	19.75	20.15	0.00	0.00	0.00	0.00	0.00
	4H	19.29	20.06	19.73	20.48	20.92	0.00	0.00	0.00	0.00	0.00
	6H	19.89	20.56	20.36	21.00	21.47	0.00	0.00	0.00	0.00	0.00
	8H	20.04	20.66	20.51	21.11	21.58	0.00	0.00	0.00	0.00	0.00
	12H	20.09	20.64	20.58	21.12	21.59	0.00	0.00	0.00	0.00	0.00
8H	4H	19.15	19.77	19.62	20.21	20.69	0.00	0.00	0.00	0.00	0.00
	6H	19.73	20.23	20.23	20.73	21.21	0.00	0.00	0.00	0.00	0.00
	8H	19.88	20.33	20.40	20.85	21.34	0.00	0.00	0.00	0.00	0.00
	12H	19.94	20.33	20.45	20.83	21.40	0.00	0.00	0.00	0.00	0.00
12H	4H	19.10	19.64	19.59	20.13	20.60	0.00	0.00	0.00	0.00	0.00
	6H	19.67	20.12	20.19	20.63	21.13	0.00	0.00	0.00	0.00	0.00
	8H	19.84	20.23	20.35	20.73	21.30	0.00	0.00	0.00	0.00	0.00