

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: P1055815

Luminaire Tested: S123R3DR-H775D950-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055815
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-H775D950-X4F0-XX-UDD-FLL-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

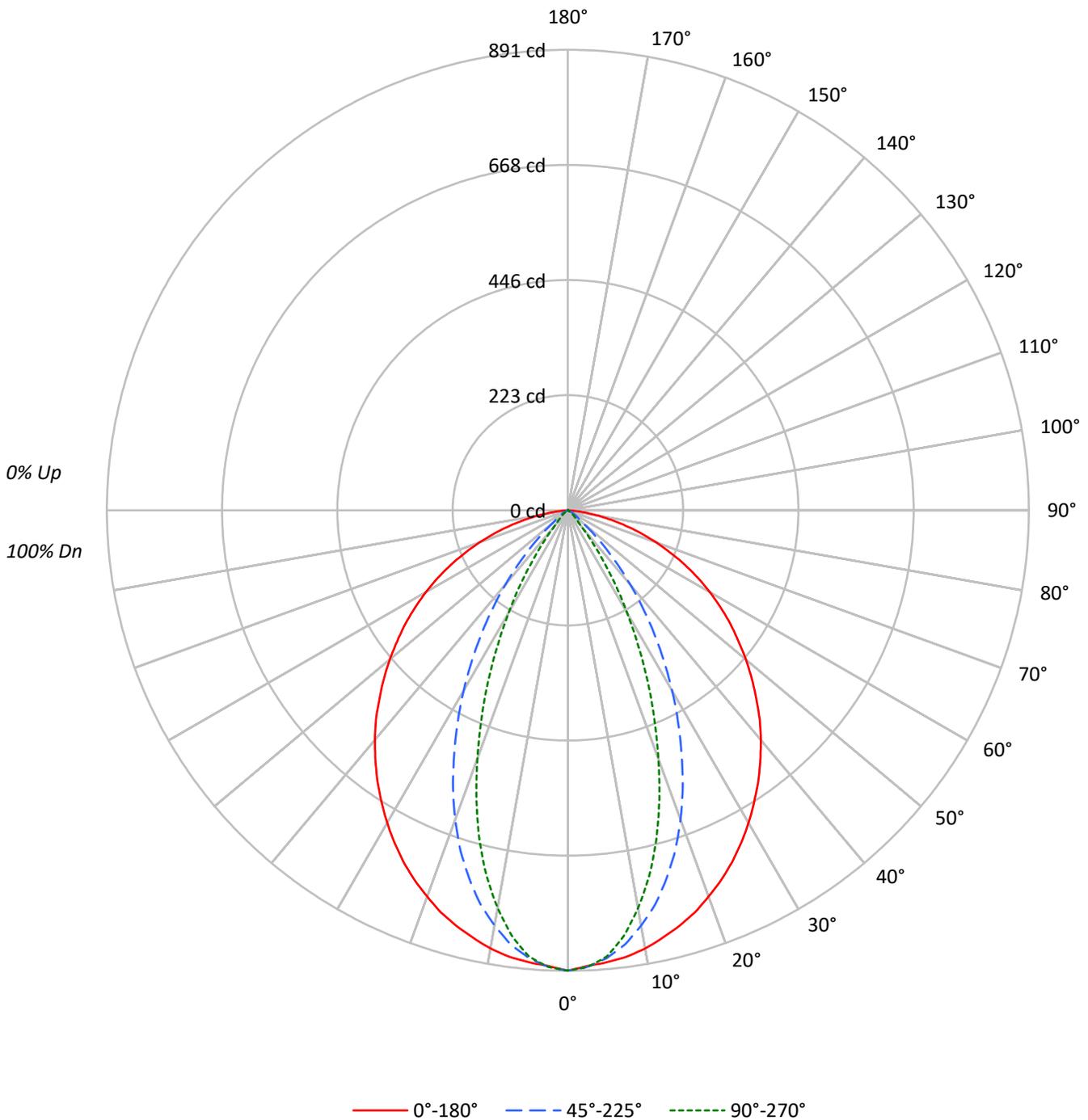
Lumens per Lamp: N/A
Luminaire Lumens: 1042.3 lumens
Efficiency: N/A
Efficacy: 43.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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	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°	10737	10737	10737
5°	10621	10521	10487
10°	10541	9986	9569
15°	10390	9202	8244
20°	10205	8166	6566
25°	9992	6919	4842
30°	9723	5608	3177
35°	9436	4270	1740
40°	9131	2951	596
45°	8774	1717	346
50°	8422	675	208
55°	8059	427	97
60°	7641	268	43
65°	7115	131	26
70°	6384	63	32
75°	5422	42	42
80°	4041	62	0
85°	1535	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8774 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	7.8
10°-20°	207.2	19.9
20°-30°	247.2	23.7
30°-40°	209.7	20.1
40°-50°	142.5	13.7
50°-60°	88.3	8.5
60°-70°	44.7	4.3
70°-80°	18.2	1.7
80°-90°	2.8	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°	536.0	51.4
0°-40°	745.7	71.5
0°-60°	976.5	93.7
0°-90°	1042.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1042.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	891	891	891	891	891	
5°	878	886	869	863	866	83
15°	832	811	737	679	660	235
25°	751	681	520	402	364	346
35°	641	515	290	156	118	401
45°	515	337	101	25	20	397
55°	383	170	20	7	5	343
65°	249	42	5	1	1	246
75°	116	7	1	1	1	124
85°	11	0	0	1	0	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	890.6	890.6	890.6	890.6	890.6
2.5°	882.3	894.3	884.1	883.2	884.1
5°	877.6	885.9	869.3	862.9	866.5
7.5°	871.2	874.9	847.1	830.5	830.5
10°	861.0	858.2	815.7	788.0	781.6
12.5°	847.1	836.1	780.6	737.2	725.2
15°	832.4	811.1	737.2	679.0	660.5
17.5°	815.7	783.4	690.1	614.3	587.6
20°	795.4	752.0	636.5	544.1	511.8
22.5°	774.2	717.8	580.2	472.1	436.0
25°	751.1	680.9	520.1	401.9	364.0
27.5°	725.2	642.1	461.0	334.4	292.9
30°	698.4	601.4	402.8	269.8	228.2
32.5°	669.8	558.9	344.6	210.6	171.8
35°	641.1	514.6	290.1	156.1	118.2
37.5°	610.6	470.2	237.4	108.1	74.8
40°	580.2	426.8	187.5	68.4	37.9
42.5°	548.8	381.5	142.3	34.2	25.9
45°	514.6	337.2	100.7	24.9	20.3
47.5°	482.2	294.7	66.5	20.3	15.7
50°	449.0	252.2	36.0	14.8	11.1
52.5°	415.7	211.6	25.9	11.1	7.4
55°	383.4	170.0	20.3	7.4	4.6
57.5°	350.1	134.0	15.7	4.6	2.8
60°	316.9	98.8	11.1	2.8	1.8
62.5°	283.6	68.4	7.4	1.8	0.9
65°	249.4	41.6	4.6	0.9	0.9
67.5°	214.3	28.6	2.8	0.9	0.9
70°	181.1	20.3	1.8	0.9	0.9
72.5°	147.8	12.9	0.9	0.9	0.0
75°	116.4	7.4	0.9	0.9	0.9
77.5°	85.9	2.8	0.9	0.9	0.0
80°	58.2	0.9	0.9	0.9	0.0
82.5°	32.3	0.0	0.9	0.9	0.0
85°	11.1	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	17.30	18.58	17.66	18.89	19.20	0.00	0.00	0.00	0.00	0.00
	3H	19.24	20.37	19.62	20.71	21.07	0.00	0.00	0.00	0.00	0.00
	4H	20.07	21.12	20.47	21.47	21.86	0.00	0.00	0.00	0.00	0.00
	6H	20.62	21.59	21.04	21.96	22.36	0.00	0.00	0.00	0.00	0.00
	8H	20.75	21.66	21.18	22.05	22.46	0.00	0.00	0.00	0.00	0.00
	12H	20.77	21.65	21.20	22.03	22.46	0.00	0.00	0.00	0.00	0.00
4H	2H	17.06	18.12	17.46	18.47	18.85	0.00	0.00	0.00	0.00	0.00
	3H	19.01	19.87	19.42	20.28	20.68	0.00	0.00	0.00	0.00	0.00
	4H	19.83	20.59	20.26	21.01	21.46	0.00	0.00	0.00	0.00	0.00
	6H	20.43	21.09	20.89	21.54	22.00	0.00	0.00	0.00	0.00	0.00
	8H	20.58	21.20	21.05	21.64	22.12	0.00	0.00	0.00	0.00	0.00
	12H	20.62	21.17	21.11	21.65	22.13	0.00	0.00	0.00	0.00	0.00
8H	4H	19.68	20.30	20.15	20.75	21.22	0.00	0.00	0.00	0.00	0.00
	6H	20.26	20.77	20.77	21.26	21.75	0.00	0.00	0.00	0.00	0.00
	8H	20.41	20.86	20.94	21.38	21.87	0.00	0.00	0.00	0.00	0.00
	12H	20.47	20.87	20.99	21.36	21.93	0.00	0.00	0.00	0.00	0.00
12H	4H	19.63	20.18	20.12	20.66	21.14	0.00	0.00	0.00	0.00	0.00
	6H	20.20	20.65	20.72	21.17	21.66	0.00	0.00	0.00	0.00	0.00
	8H	20.37	20.76	20.88	21.26	21.83	0.00	0.00	0.00	0.00	0.00