

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: P1055665

Luminaire Tested: S123R3DR-S775D850-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055665
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-S775D850-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

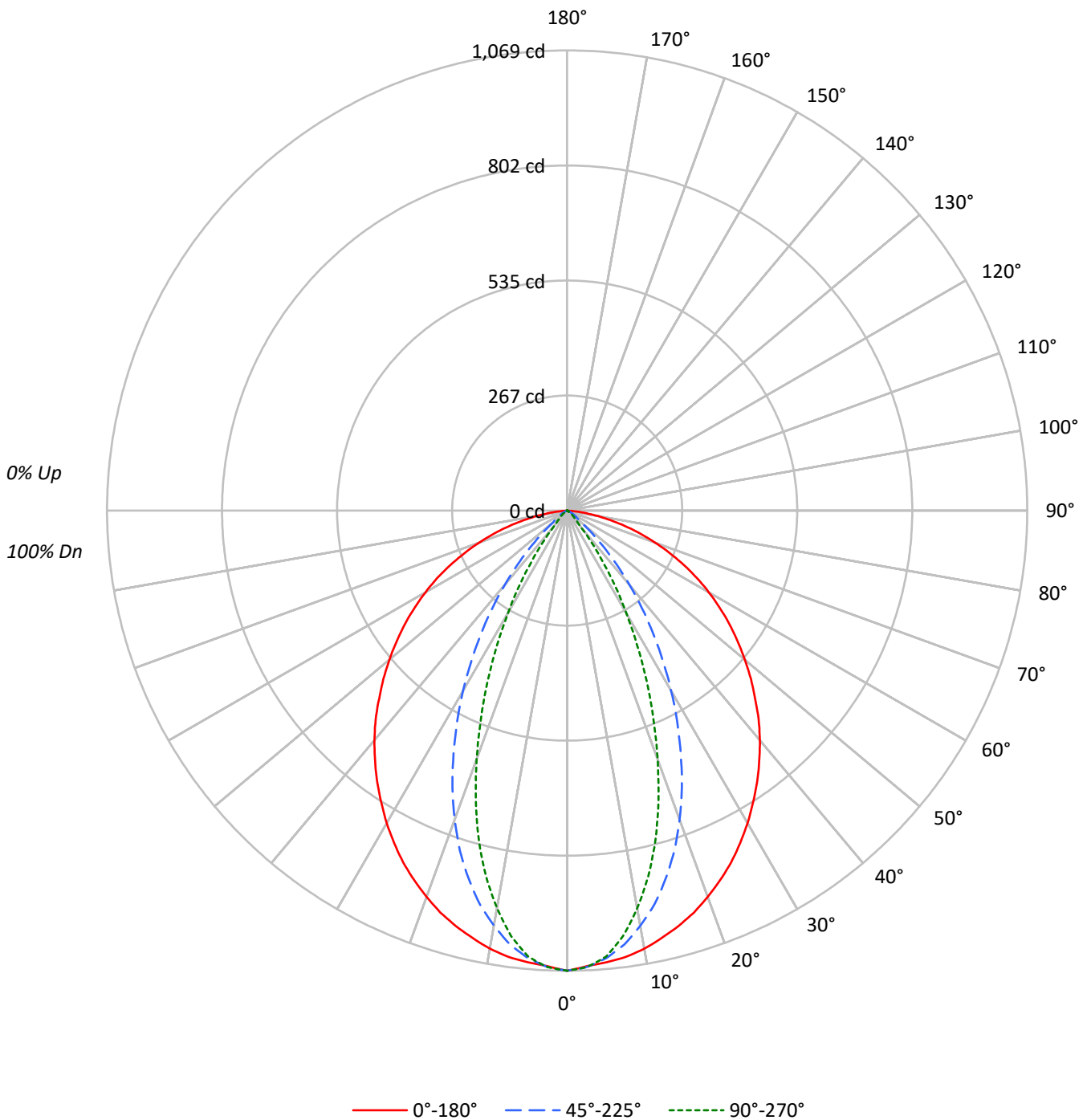
Lumens per Lamp: N/A
Luminaire Lumens: 1251.2 lumens
Efficiency: N/A
Efficacy: 47.4 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{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	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	58	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°	12890	12890	12890
5°	12750	12630	12589
10°	12654	11988	11486
15°	12472	11046	9897
20°	12250	9804	7883
25°	11994	8306	5812
30°	11672	6731	3813
35°	11327	5125	2090
40°	10962	3543	716
45°	10532	2061	416
50°	10110	812	249
55°	9673	513	116
60°	9173	321	53
65°	8541	157	31
70°	7663	78	39
75°	6508	51	51
80°	4853	76	0
85°	1840	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10532 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.0	7.8
10°-20°	248.7	19.9
20°-30°	296.7	23.7
30°-40°	251.7	20.1
40°-50°	171.1	13.7
50°-60°	106.0	8.5
60°-70°	53.7	4.3
70°-80°	21.9	1.7
80°-90°	3.4	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°	643.5	51.4
0°-40°	895.2	71.5
0°-60°	1172.3	93.7
0°-90°	1251.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1251.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1069	1069	1069	1069	1069	
5°	1054	1064	1044	1036	1040	100
15°	999	974	885	815	793	282
25°	902	817	624	482	437	415
35°	770	618	348	187	142	481
45°	618	405	121	30	24	477
55°	460	204	24	9	6	411
65°	299	50	6	1	1	296
75°	140	9	1	1	1	149
85°	13	0	0	1	0	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1069.1	1069.1	1069.1	1069.1	1069.1
2.5°	1059.1	1073.5	1061.3	1060.2	1061.3
5°	1053.5	1063.5	1043.6	1035.8	1040.2
7.5°	1045.8	1050.2	1017.0	997.0	997.0
10°	1033.6	1030.3	979.2	946.0	938.2
12.5°	1017.0	1003.6	937.1	885.0	870.6
15°	999.2	973.7	885.0	815.1	792.9
17.5°	979.2	940.4	828.4	737.5	705.3
20°	954.8	902.7	764.1	653.2	614.4
22.5°	929.3	861.7	696.5	566.7	523.4
25°	901.6	817.3	624.4	482.4	436.9
27.5°	870.6	770.8	553.4	401.5	351.6
30°	838.4	722.0	483.5	323.8	273.9
32.5°	804.0	670.9	413.7	252.9	206.3
35°	769.6	617.7	348.2	187.4	142.0
37.5°	733.0	564.5	285.0	129.8	89.8
40°	696.5	512.4	225.1	82.1	45.5
42.5°	658.7	458.0	170.8	41.0	31.1
45°	617.7	404.8	120.9	29.9	24.4
47.5°	578.9	353.8	79.8	24.4	18.9
50°	539.0	302.8	43.3	17.7	13.3
52.5°	499.0	254.0	31.1	13.3	8.9
55°	460.2	204.1	24.4	8.9	5.5
57.5°	420.3	160.8	18.9	5.5	3.3
60°	380.4	118.7	13.3	3.3	2.2
62.5°	340.5	82.1	8.9	2.2	1.1
65°	299.4	49.9	5.5	1.1	1.1
67.5°	257.3	34.4	3.3	1.1	1.1
70°	217.4	24.4	2.2	1.1	1.1
72.5°	177.4	15.5	1.1	1.1	0.0
75°	139.7	8.9	1.1	1.1	1.1
77.5°	103.1	3.3	1.1	1.1	0.0
80°	69.9	1.1	1.1	1.1	0.0
82.5°	38.8	0.0	1.1	1.1	0.0
85°	13.3	0.0	0.0	1.1	0.0
87.5°	0.0	0.0	0.0	1.1	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	17.93	19.21	18.29	19.52	19.84	0.00	0.00	0.00	0.00	0.00
	3H	19.88	21.01	20.26	21.34	21.71	0.00	0.00	0.00	0.00	0.00
	4H	20.70	21.76	21.11	22.11	22.49	0.00	0.00	0.00	0.00	0.00
	6H	21.26	22.22	21.67	22.60	22.99	0.00	0.00	0.00	0.00	0.00
	8H	21.38	22.30	21.81	22.69	23.09	0.00	0.00	0.00	0.00	0.00
	12H	21.41	22.28	21.84	22.66	23.09	0.00	0.00	0.00	0.00	0.00
4H	2H	17.69	18.75	18.10	19.10	19.48	0.00	0.00	0.00	0.00	0.00
	3H	19.65	20.51	20.06	20.91	21.32	0.00	0.00	0.00	0.00	0.00
	4H	20.46	21.23	20.90	21.65	22.09	0.00	0.00	0.00	0.00	0.00
	6H	21.06	21.72	21.52	22.17	22.64	0.00	0.00	0.00	0.00	0.00
	8H	21.21	21.83	21.68	22.28	22.75	0.00	0.00	0.00	0.00	0.00
	12H	21.26	21.80	21.75	22.29	22.76	0.00	0.00	0.00	0.00	0.00
8H	4H	20.32	20.94	20.79	21.38	21.85	0.00	0.00	0.00	0.00	0.00
	6H	20.90	21.40	21.40	21.90	22.38	0.00	0.00	0.00	0.00	0.00
	8H	21.05	21.50	21.57	22.01	22.51	0.00	0.00	0.00	0.00	0.00
	12H	21.11	21.50	21.62	22.00	22.57	0.00	0.00	0.00	0.00	0.00
12H	4H	20.27	20.81	20.76	21.30	21.77	0.00	0.00	0.00	0.00	0.00
	6H	20.84	21.29	21.36	21.80	22.30	0.00	0.00	0.00	0.00	0.00
	8H	21.00	21.40	21.52	21.89	22.47	0.00	0.00	0.00	0.00	0.00