

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: P1055813

Luminaire Tested: S123R3DR-H775D940-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055813
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-H775D940-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

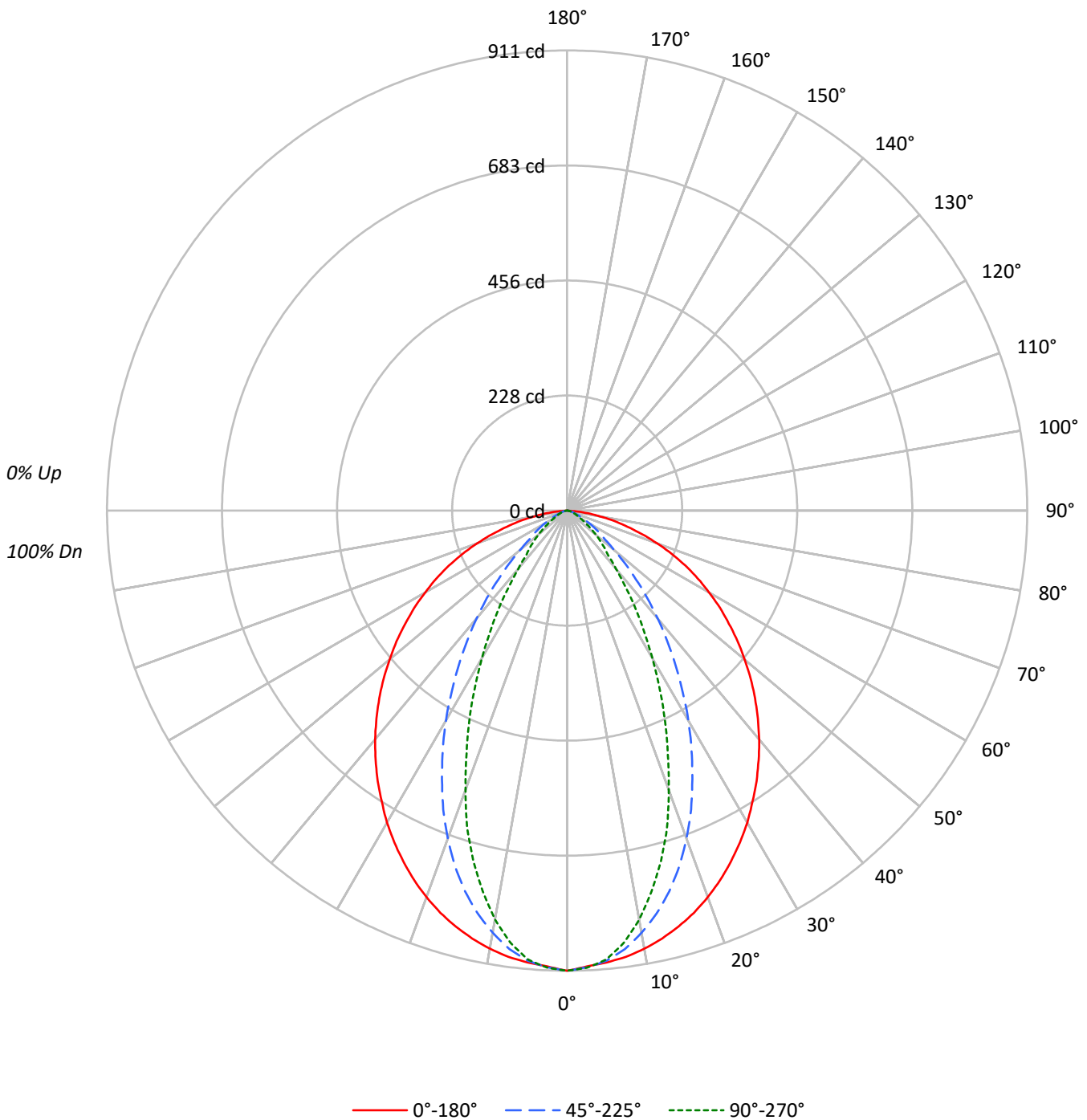
Lumens per Lamp: N/A
Luminaire Lumens: 1266.9 lumens
Efficiency: N/A
Efficacy: 53.2 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10983	10983	10983
5°	10868	10827	10795
10°	10783	10391	10064
15°	10638	9743	8957
20°	10448	8863	7544
25°	10201	7799	6089
30°	9930	6684	4689
35°	9621	5516	3469
40°	9309	4389	2364
45°	8967	3284	1782
50°	8600	2285	1394
55°	8223	1669	1017
60°	7829	1249	728
65°	7366	839	568
70°	6666	610	458
75°	5753	443	363
80°	4617	361	299
85°	2393	360	235

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8967 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.2	6.6
10°-20°	219.2	17.3
20°-30°	275.4	21.7
30°-40°	256.5	20.2
40°-50°	196.4	15.5
50°-60°	130.5	10.3
60°-70°	70.4	5.6
70°-80°	28.8	2.3
80°-90°	5.5	0.4
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°	578.8	45.7
0°-40°	835.3	65.9
0°-60°	1162.2	91.7
0°-90°	1266.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1266.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	911	911	911	911	911	
5°	898	908	895	891	892	85
15°	852	838	781	735	718	240
25°	767	715	586	489	458	353
35°	654	557	375	265	236	409
45°	526	389	193	113	104	406
55°	391	226	79	55	48	350
65°	258	87	29	22	20	255
75°	124	21	10	9	8	132
85°	17	3	3	3	2	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	911.0	911.0	911.0	911.0	911.0
2.5°	903.2	914.5	905.0	905.8	905.8
5°	898.0	907.5	894.6	891.1	892.0
7.5°	891.1	897.2	875.6	864.4	862.6
10°	880.8	882.5	848.8	829.0	822.1
12.5°	867.8	861.8	817.7	784.9	772.0
15°	852.3	838.5	780.6	734.8	717.6
17.5°	835.0	811.7	738.3	678.7	658.0
20°	814.3	781.5	690.8	616.5	588.0
22.5°	791.8	749.5	640.7	552.6	520.7
25°	766.8	715.0	586.3	488.7	457.7
27.5°	740.9	677.9	532.8	428.3	396.3
30°	713.3	639.9	480.1	369.6	336.8
32.5°	683.0	598.4	425.7	315.2	282.4
35°	653.7	557.0	374.8	265.1	235.7
37.5°	622.6	515.5	325.5	221.1	188.2
40°	591.5	473.2	278.9	177.9	150.2
42.5°	558.7	430.9	234.9	141.6	120.0
45°	525.9	388.6	192.6	113.1	104.5
47.5°	493.1	346.3	155.4	97.6	88.9
50°	458.5	305.7	121.8	82.9	74.3
52.5°	425.7	265.1	95.0	68.2	60.4
55°	391.2	226.2	79.4	55.3	48.4
57.5°	359.2	186.5	65.6	43.2	38.0
60°	324.7	151.1	51.8	33.7	30.2
62.5°	291.9	118.3	39.7	26.8	24.2
65°	258.2	87.2	29.4	21.6	19.9
67.5°	224.5	63.0	22.5	17.3	16.4
70°	189.1	47.5	17.3	13.8	13.0
72.5°	155.4	33.7	13.0	11.2	10.4
75°	123.5	20.7	9.5	8.6	7.8
77.5°	95.0	12.1	6.9	6.9	6.0
80°	66.5	6.9	5.2	5.2	4.3
82.5°	40.6	4.3	3.5	3.5	3.5
85°	17.3	2.6	2.6	2.6	1.7
87.5°	2.6	0.9	0.9	0.9	0.9
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	18.14	19.49	18.50	19.81	20.12	6.72	8.07	7.08	8.39	8.70
	3H	19.89	21.10	20.27	21.43	21.79	7.38	8.58	7.76	8.91	9.28
	4H	20.59	21.72	20.99	22.07	22.45	7.58	8.70	7.98	9.05	9.43
	6H	21.10	22.14	21.52	22.51	22.90	7.70	8.73	8.11	9.10	9.49
	8H	21.24	22.22	21.67	22.61	23.02	7.73	8.71	8.16	9.10	9.51
	12H	21.30	22.23	21.73	22.61	23.05	7.74	8.68	8.17	9.06	9.49
4H	2H	17.95	19.07	18.35	19.42	19.80	7.27	8.40	7.68	8.75	9.13
	3H	19.74	20.66	20.15	21.06	21.47	8.07	8.99	8.48	9.40	9.80
	4H	20.43	21.26	20.87	21.68	22.12	8.33	9.15	8.76	9.57	10.01
	6H	21.00	21.71	21.47	22.16	22.63	8.52	9.24	8.99	9.68	10.15
	8H	21.18	21.84	21.65	22.29	22.76	8.58	9.24	9.05	9.69	10.16
	12H	21.27	21.85	21.75	22.33	22.81	8.61	9.20	9.10	9.68	10.16
8H	4H	20.31	20.97	20.78	21.42	21.89	8.64	9.31	9.11	9.75	10.22
	6H	20.86	21.41	21.37	21.90	22.38	8.89	9.43	9.39	9.93	10.41
	8H	21.04	21.53	21.56	22.04	22.53	8.98	9.47	9.50	9.98	10.47
	12H	21.15	21.57	21.66	22.07	22.64	9.06	9.49	9.58	9.98	10.55
12H	4H	20.27	20.85	20.75	21.34	21.81	8.69	9.27	9.17	9.76	10.23
	6H	20.81	21.29	21.33	21.81	22.30	8.94	9.42	9.46	9.94	10.43
	8H	21.00	21.43	21.52	21.92	22.49	9.07	9.49	9.58	9.99	10.56