

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: P1055678

Luminaire Tested: S123R3DR-S775D940-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055678
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-S775D940-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

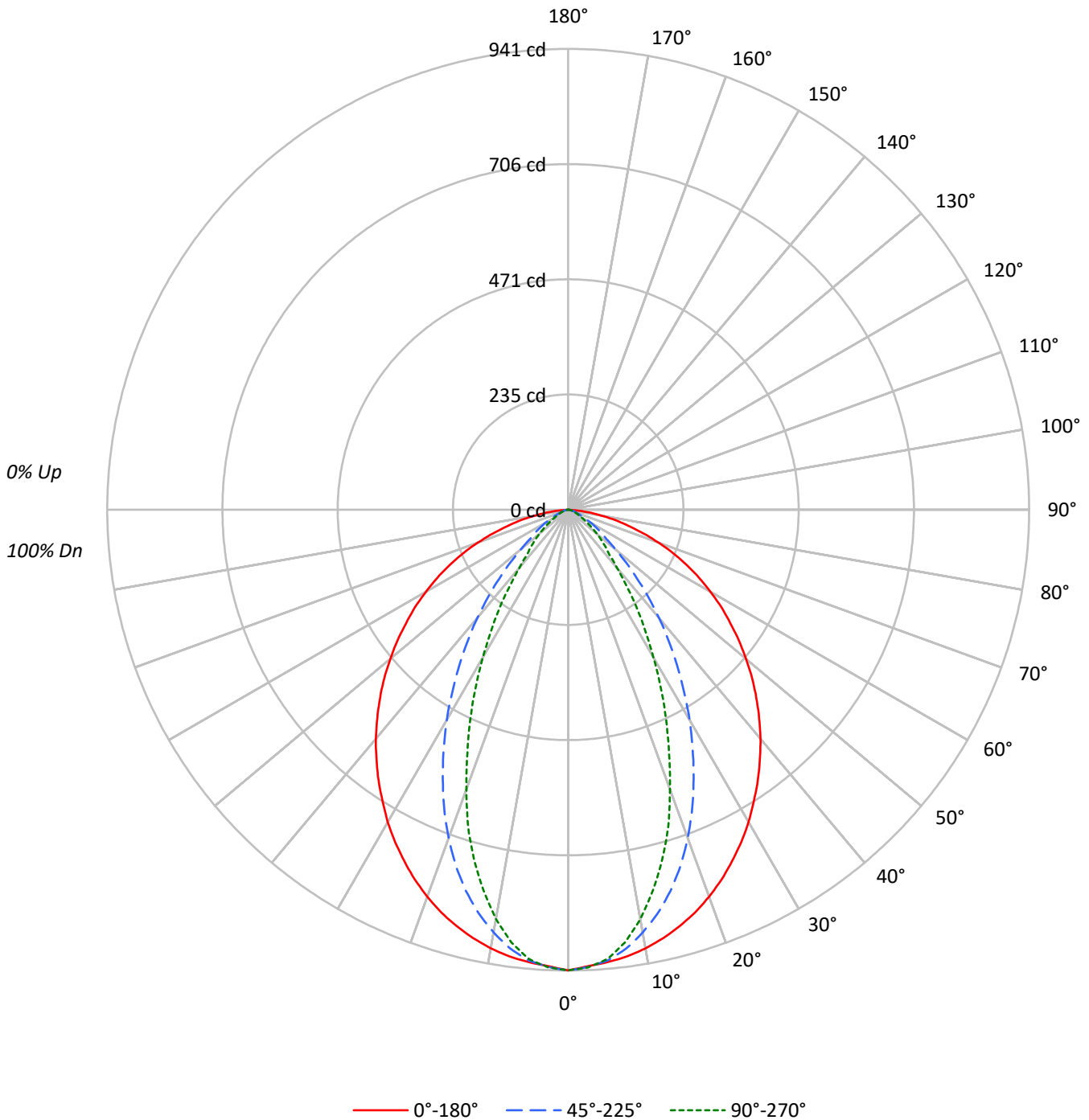
Lumens per Lamp: N/A
Luminaire Lumens: 1308.3 lumens
Efficiency: N/A
Efficacy: 49.6 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11343	11343	11343
5°	11224	11180	11148
10°	11134	10730	10393
15°	10985	10062	9249
20°	10789	9153	7792
25°	10533	8055	6287
30°	10255	6902	4842
35°	9935	5696	3582
40°	9613	4533	2443
45°	9260	3391	1840
50°	8881	2358	1439
55°	8490	1724	1049
60°	8085	1290	752
65°	7606	864	585
70°	6884	627	472
75°	5939	457	373
80°	4770	375	312
85°	2462	373	249

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9260 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.0	6.6
10°-20°	226.4	17.3
20°-30°	284.4	21.7
30°-40°	264.9	20.2
40°-50°	202.8	15.5
50°-60°	134.8	10.3
60°-70°	72.6	5.6
70°-80°	29.8	2.3
80°-90°	5.7	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°	597.7	45.7
0°-40°	862.6	65.9
0°-60°	1200.2	91.7
0°-90°	1308.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1308.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	941	941	941	941	941	
5°	927	937	924	920	921	88
15°	880	866	806	759	741	248
25°	792	738	606	505	473	365
35°	675	575	387	274	243	422
45°	543	401	199	117	108	419
55°	404	234	82	57	50	362
65°	267	90	30	22	20	263
75°	128	21	10	9	8	137
85°	18	3	3	3	2	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	940.8	940.8	940.8	940.8	940.8
2.5°	932.7	944.3	934.5	935.4	935.4
5°	927.4	937.2	923.8	920.2	921.1
7.5°	920.2	926.5	904.2	892.6	890.8
10°	909.5	911.3	876.5	856.0	848.9
12.5°	896.2	889.9	844.4	810.6	797.2
15°	880.1	865.8	806.1	758.8	741.0
17.5°	862.3	838.2	762.4	700.9	679.5
20°	840.9	807.0	713.4	636.7	607.3
22.5°	817.7	774.0	661.6	570.7	537.7
25°	791.8	738.3	605.5	504.7	472.6
27.5°	765.1	700.0	550.2	442.3	409.3
30°	736.6	660.8	495.8	381.7	347.8
32.5°	705.3	618.0	439.6	325.5	291.6
35°	675.0	575.2	387.0	273.8	243.4
37.5°	642.9	532.4	336.2	228.3	194.4
40°	610.8	488.7	288.0	183.7	155.2
42.5°	576.9	445.0	242.5	146.2	123.9
45°	543.1	401.3	198.9	116.8	107.9
47.5°	509.2	357.6	160.5	100.8	91.8
50°	473.5	315.7	125.7	85.6	76.7
52.5°	439.6	273.8	98.1	70.4	62.4
55°	403.9	233.6	82.0	57.1	49.9
57.5°	371.0	192.6	67.8	44.6	39.2
60°	335.3	156.0	53.5	34.8	31.2
62.5°	301.4	122.2	41.0	27.6	25.0
65°	266.6	90.1	30.3	22.3	20.5
67.5°	231.8	65.1	23.2	17.8	16.9
70°	195.3	49.0	17.8	14.3	13.4
72.5°	160.5	34.8	13.4	11.6	10.7
75°	127.5	21.4	9.8	8.9	8.0
77.5°	98.1	12.5	7.1	7.1	6.2
80°	68.7	7.1	5.4	5.4	4.5
82.5°	41.9	4.5	3.6	3.6	3.6
85°	17.8	2.7	2.7	2.7	1.8
87.5°	2.7	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	18.25	19.61	18.61	19.92	20.23	6.82	8.18	7.19	8.49	8.81
	3H	20.00	21.21	20.38	21.54	21.90	7.49	8.69	7.87	9.02	9.39
	4H	20.70	21.83	21.11	22.18	22.56	7.68	8.81	8.08	9.16	9.54
	6H	21.22	22.25	21.63	22.62	23.01	7.80	8.84	8.22	9.21	9.60
	8H	21.36	22.34	21.79	22.73	23.13	7.84	8.82	8.27	9.21	9.61
	12H	21.41	22.34	21.84	22.73	23.16	7.85	8.79	8.28	9.17	9.60
4H	2H	18.06	19.18	18.46	19.53	19.92	7.38	8.50	7.78	8.85	9.24
	3H	19.85	20.77	20.26	21.17	21.58	8.18	9.10	8.59	9.50	9.91
	4H	20.55	21.37	20.98	21.79	22.23	8.44	9.26	8.87	9.68	10.12
	6H	21.12	21.83	21.58	22.27	22.74	8.63	9.34	9.10	9.79	10.26
	8H	21.29	21.95	21.76	22.40	22.87	8.69	9.35	9.16	9.80	10.27
	12H	21.38	21.96	21.86	22.45	22.92	8.72	9.31	9.21	9.79	10.27
8H	4H	20.42	21.08	20.89	21.53	22.00	8.75	9.41	9.22	9.86	10.33
	6H	20.98	21.52	21.48	22.01	22.49	9.00	9.54	9.50	10.04	10.52
	8H	21.15	21.64	21.67	22.15	22.64	9.09	9.57	9.61	10.09	10.58
	12H	21.26	21.69	21.77	22.18	22.75	9.17	9.60	9.69	10.09	10.66
12H	4H	20.38	20.97	20.86	21.45	21.92	8.79	9.38	9.28	9.86	10.34
	6H	20.92	21.40	21.44	21.92	22.41	9.04	9.53	9.57	10.05	10.54
	8H	21.11	21.54	21.63	22.04	22.61	9.17	9.60	9.69	10.10	10.67