

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: P1055962

Luminaire Tested: S124R3DR-S1020D850-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055962
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-S1020D850-X4F0-XX-UDD-FLL-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

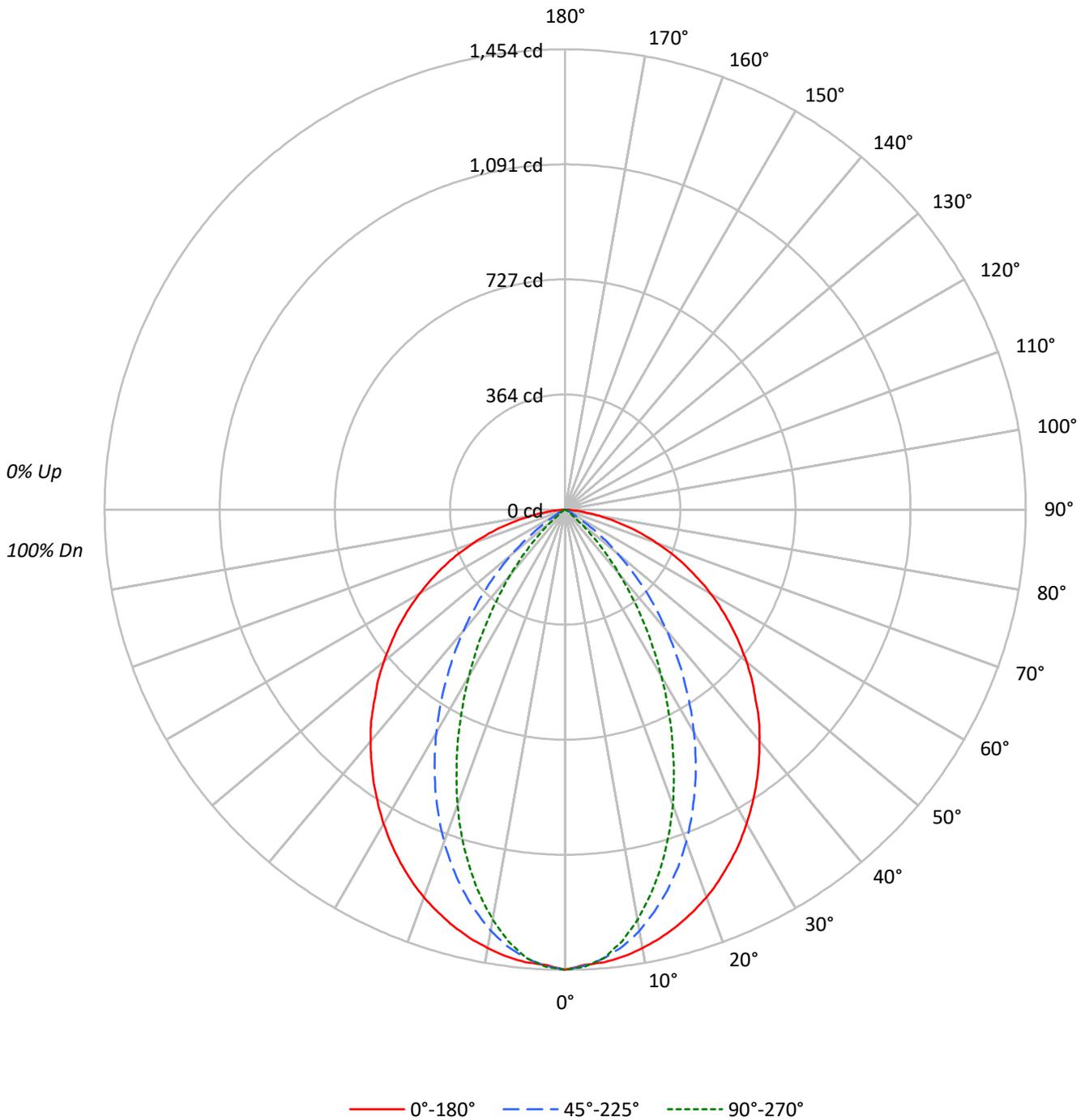
Lumens per Lamp: N/A
Luminaire Lumens: 2031.7 lumens
Efficiency: N/A
Efficacy: 58.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12852	12852	12852
5°	12737	12623	12611
10°	12628	12129	11809
15°	12470	11401	10697
20°	12269	10512	9346
25°	11998	9468	7799
30°	11698	8308	6198
35°	11368	7045	4614
40°	11020	5741	3076
45°	10638	4384	1693
50°	10272	2999	470
55°	9864	1626	308
60°	9375	504	177
65°	8766	328	90
70°	7921	147	36
75°	6815	48	0
80°	5153	0	0
85°	2171	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10638 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.1	6.6
10°-20°	352.1	17.3
20°-30°	454.9	22.4
30°-40°	434.8	21.4
40°-50°	325.2	16.0
50°-60°	193.5	9.5
60°-70°	98.3	4.8
70°-80°	34.2	1.7
80°-90°	4.7	0.2
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°	941.1	46.3
0°-40°	1375.9	67.7
0°-60°	1894.6	93.3
0°-90°	2031.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2031.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1454	1454	1454	1454	1454	
5°	1435	1446	1422	1415	1421	136
15°	1362	1334	1246	1187	1169	384
25°	1230	1144	970	842	800	566
35°	1053	908	653	486	428	659
45°	851	653	351	187	135	658
55°	640	398	106	24	20	571
65°	419	161	16	6	4	414
75°	200	21	1	1	0	212
85°	21	0	0	0	0	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1453.6	1453.6	1453.6	1453.6	1453.6
2.5°	1439.4	1456.5	1442.2	1443.7	1445.1
5°	1435.1	1446.5	1422.3	1415.2	1420.9
7.5°	1423.7	1428.0	1392.4	1373.8	1375.3
10°	1406.6	1402.3	1351.0	1319.7	1315.4
12.5°	1386.7	1372.4	1301.1	1255.5	1245.6
15°	1362.4	1333.9	1245.6	1187.1	1168.6
17.5°	1333.9	1292.6	1184.3	1107.3	1084.5
20°	1304.0	1247.0	1117.3	1021.8	993.3
22.5°	1268.4	1195.7	1044.6	932.0	896.4
25°	1229.9	1144.4	970.5	842.3	799.5
27.5°	1190.0	1088.8	892.1	751.0	701.2
30°	1145.8	1030.4	813.8	658.4	607.1
32.5°	1100.2	970.5	732.5	572.9	515.9
35°	1053.2	907.8	652.7	486.0	427.5
37.5°	1004.7	845.1	575.8	403.3	343.5
40°	954.8	781.0	497.4	324.9	266.5
42.5°	906.4	716.8	423.3	250.8	196.7
45°	850.8	652.7	350.6	186.7	135.4
47.5°	800.9	590.0	280.8	126.8	79.8
50°	746.8	523.0	218.0	74.1	34.2
52.5°	692.6	460.3	159.6	32.8	25.7
55°	639.9	397.6	105.5	24.2	20.0
57.5°	584.3	334.9	57.0	18.5	14.3
60°	530.2	273.6	28.5	14.3	10.0
62.5°	474.6	215.2	22.8	8.6	5.7
65°	419.0	161.0	15.7	5.7	4.3
67.5°	363.4	109.7	10.0	2.9	1.4
70°	306.4	67.0	5.7	1.4	1.4
72.5°	252.2	34.2	2.9	1.4	1.4
75°	199.5	21.4	1.4	1.4	0.0
77.5°	148.2	11.4	1.4	1.4	0.0
80°	101.2	4.3	0.0	0.0	0.0
82.5°	58.4	1.4	0.0	0.0	0.0
85°	21.4	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)