

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: P1056502

Luminaire Tested: S125R3DR-H1090D850-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056502
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-H1090D850-X4F0-XX-UDD-F-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

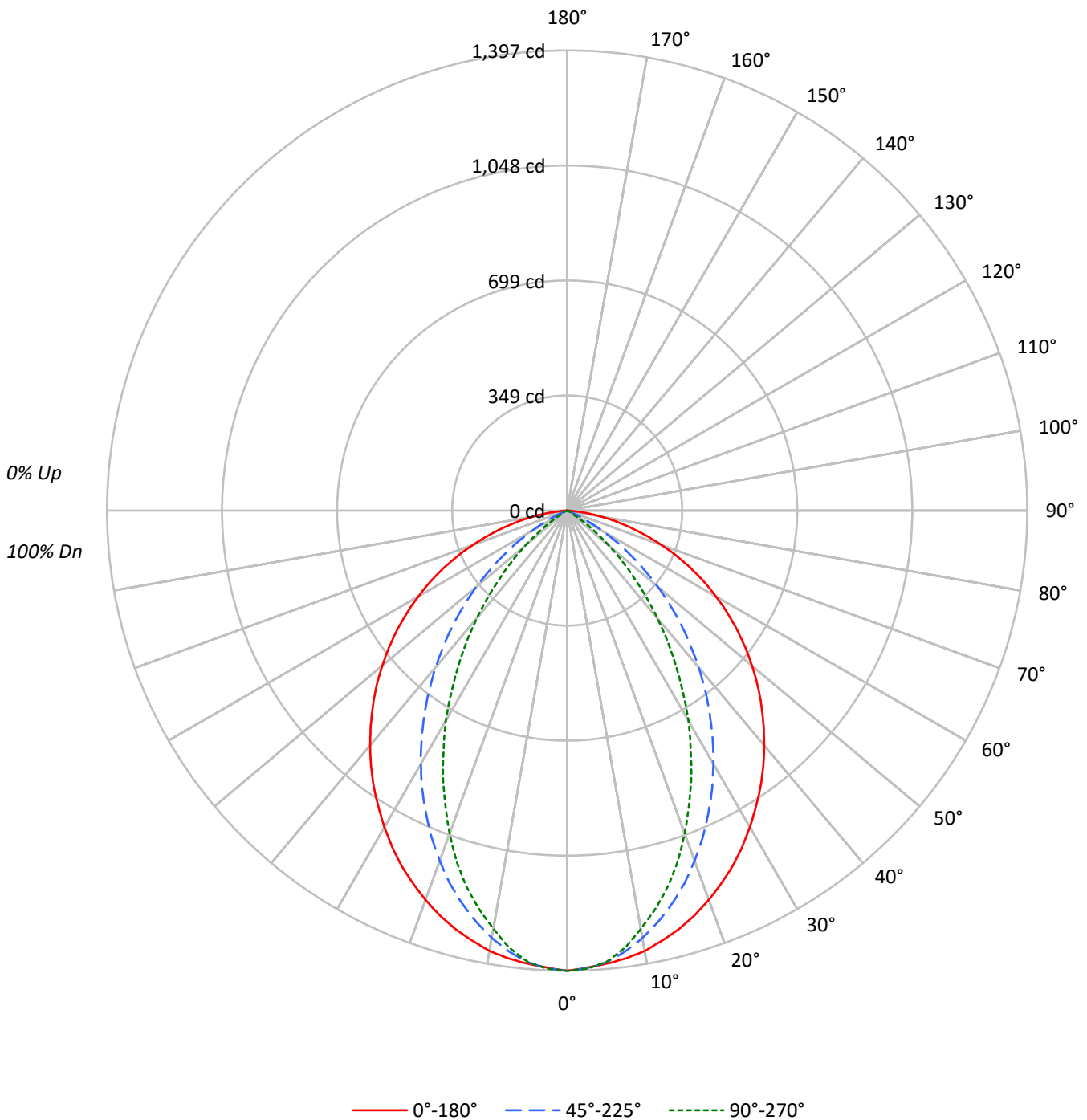
Lumens per Lamp: N/A
Luminaire Lumens: 2265.0 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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

TEST NUMBER: P1056502

CATALOG NUMBER: S125R3DR-H1090D850-X4F0-XX-UDD-F-B

Luminous Intensity Polar Plot





TEST NUMBER: P1056502

CATALOG NUMBER: S125R3DR-H1090D850-X4F0-XX-UDD-F-B

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	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	78					78			
3	96	87	81	75	94	86	80	75	83	78	74	80	76	72	78	74	71	69					69			
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	61					61			
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55					55			
6	77	66	58	53	76	65	58	52	63	57	52	62	56	52	60	55	51	49					49			
7	72	61	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	45					45			
8	68	56	48	43	66	55	48	43	54	47	43	53	47	43	52	46	42	41					41			
9	64	52	44	39	62	51	44	39	50	44	39	49	43	39	48	43	39	37					37			
10	60	48	41	36	59	48	41	36	47	40	36	46	40	36	45	40	36	34					34			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9879	9879	9879
5°	9799	9770	9760
10°	9743	9455	9256
15°	9619	9031	8646
20°	9461	8512	7846
25°	9280	7908	6957
30°	9056	7247	6014
35°	8833	6514	4972
40°	8589	5726	3937
45°	8336	4888	2852
50°	8058	3945	1843
55°	7750	2885	820
60°	7382	1781	235
65°	6927	649	139
70°	6269	229	58
75°	5446	76	38
80°	4173	57	0
85°	1906	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8336 cd/sqm



TEST NUMBER: P1056502

CATALOG NUMBER: S125R3DR-H1090D850-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.8	5.7
10°-20°	348.5	15.4
20°-30°	471.5	20.8
30°-40°	484.4	21.4
40°-50°	401.3	17.7
50°-60°	257.6	11.4
60°-70°	124.4	5.5
70°-80°	42.1	1.9
80°-90°	5.4	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°	949.8	41.9
0°-40°	1434.2	63.3
0°-60°	2093.1	92.4
0°-90°	2265.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2265.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1397	1397	1397	1397	1397	
5°	1381	1392	1377	1368	1375	131
15°	1314	1298	1234	1191	1181	370
25°	1190	1132	1014	922	892	547
35°	1024	925	755	623	576	640
45°	834	697	489	338	285	643
55°	629	461	234	102	66	562
65°	414	228	39	11	8	410
75°	199	43	3	1	1	211
85°	24	0	0	0	0	37
90°	0	0	0	0	0	



TEST NUMBER: P1056502

CATALOG NUMBER: S125R3DR-H1090D850-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1397.4	1397.4	1397.4	1397.4	1397.4
2.5°	1389.1	1400.2	1390.5	1389.1	1391.9
5°	1380.8	1391.9	1376.7	1368.4	1375.3
7.5°	1371.1	1376.7	1350.3	1336.5	1339.3
10°	1357.3	1355.9	1317.1	1293.6	1289.4
12.5°	1336.5	1329.6	1278.3	1245.1	1238.2
15°	1314.3	1297.7	1234.0	1191.1	1181.4
17.5°	1288.0	1261.7	1185.5	1130.1	1116.3
20°	1257.6	1221.5	1131.5	1063.7	1042.9
22.5°	1224.3	1178.6	1074.7	994.4	966.7
25°	1189.7	1131.5	1013.8	922.4	891.9
27.5°	1150.9	1083.0	952.9	849.0	811.6
30°	1109.4	1031.8	887.8	774.2	736.8
32.5°	1066.4	980.6	822.7	699.4	653.7
35°	1023.5	925.2	754.8	623.2	576.1
37.5°	977.8	869.8	688.3	551.2	500.0
40°	930.7	813.0	620.5	476.4	426.6
42.5°	882.2	754.8	552.6	405.8	354.6
45°	833.8	696.6	488.9	337.9	285.3
47.5°	783.9	637.1	422.4	271.5	225.8
50°	732.7	578.9	358.7	211.9	167.6
52.5°	681.4	519.4	293.6	153.7	113.6
55°	628.8	461.2	234.1	102.5	66.5
57.5°	576.1	401.6	178.7	56.8	24.9
60°	522.1	344.9	126.0	19.4	16.6
62.5°	469.5	283.9	78.9	15.2	12.5
65°	414.1	228.5	38.8	11.1	8.3
67.5°	360.1	175.9	16.6	6.9	4.2
70°	303.3	127.4	11.1	4.2	2.8
72.5°	250.7	81.7	6.9	2.8	1.4
75°	199.4	42.9	2.8	1.4	1.4
77.5°	149.6	18.0	1.4	1.4	1.4
80°	102.5	8.3	1.4	1.4	0.0
82.5°	60.9	2.8	1.4	1.4	0.0
85°	23.5	0.0	0.0	0.0	0.0
87.5°	1.4	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1056502
 CATALOG NUMBER: S125R3DR-H1090D850-X4F0-XX-UDD-F-B

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	19.03	20.41	19.39	20.72	21.04	3.89	5.28	4.26	5.59	5.90
	3H	20.58	21.80	20.95	22.13	22.50	3.81	5.04	4.19	5.37	5.74
	4H	21.10	22.24	21.50	22.59	22.97	3.75	4.89	4.15	5.24	5.62
	6H	21.44	22.49	21.85	22.86	23.25	3.68	4.73	4.09	5.10	5.49
	8H	21.52	22.52	21.95	22.91	23.31	3.64	4.63	4.07	5.03	5.43
	12H	21.54	22.49	21.97	22.87	23.30	3.60	4.55	4.03	4.93	5.36
4H	2H	18.83	19.97	19.23	20.32	20.71	4.76	5.90	5.16	6.25	6.63
	3H	20.44	21.38	20.86	21.78	22.18	4.71	5.64	5.12	6.04	6.45
	4H	20.96	21.80	21.40	22.22	22.66	4.63	5.46	5.06	5.88	6.32
	6H	21.34	22.06	21.80	22.50	22.97	4.56	5.28	5.03	5.73	6.19
	8H	21.44	22.11	21.91	22.56	23.03	4.51	5.18	4.98	5.63	6.10
	12H	21.47	22.07	21.96	22.55	23.02	4.47	5.06	4.96	5.55	6.02
8H	4H	20.84	21.51	21.31	21.95	22.42	5.65	6.32	6.12	6.77	7.24
	6H	21.19	21.74	21.69	22.24	22.72	5.57	6.12	6.07	6.61	7.09
	8H	21.29	21.78	21.81	22.29	22.79	5.51	6.01	6.03	6.52	7.01
	12H	21.33	21.77	21.84	22.26	22.83	5.47	5.91	5.99	6.40	6.97
12H	4H	20.79	21.39	21.28	21.87	22.34	5.73	6.32	6.21	6.80	7.28
	6H	21.13	21.63	21.65	22.14	22.63	5.63	6.12	6.15	6.64	7.13
	8H	21.25	21.68	21.76	22.18	22.75	5.60	6.03	6.11	6.53	7.10