

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: P992359

Luminaire Tested: S123DR-B1165DB2750-4F0-XX-W2A-D_3500K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P992359
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DR-B1165DB2750-4F0-XX-W2A-D_3500K
Description: Define 3 Direct Recessed with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}
Light Source: -
Ballast/Driver: -

Summary

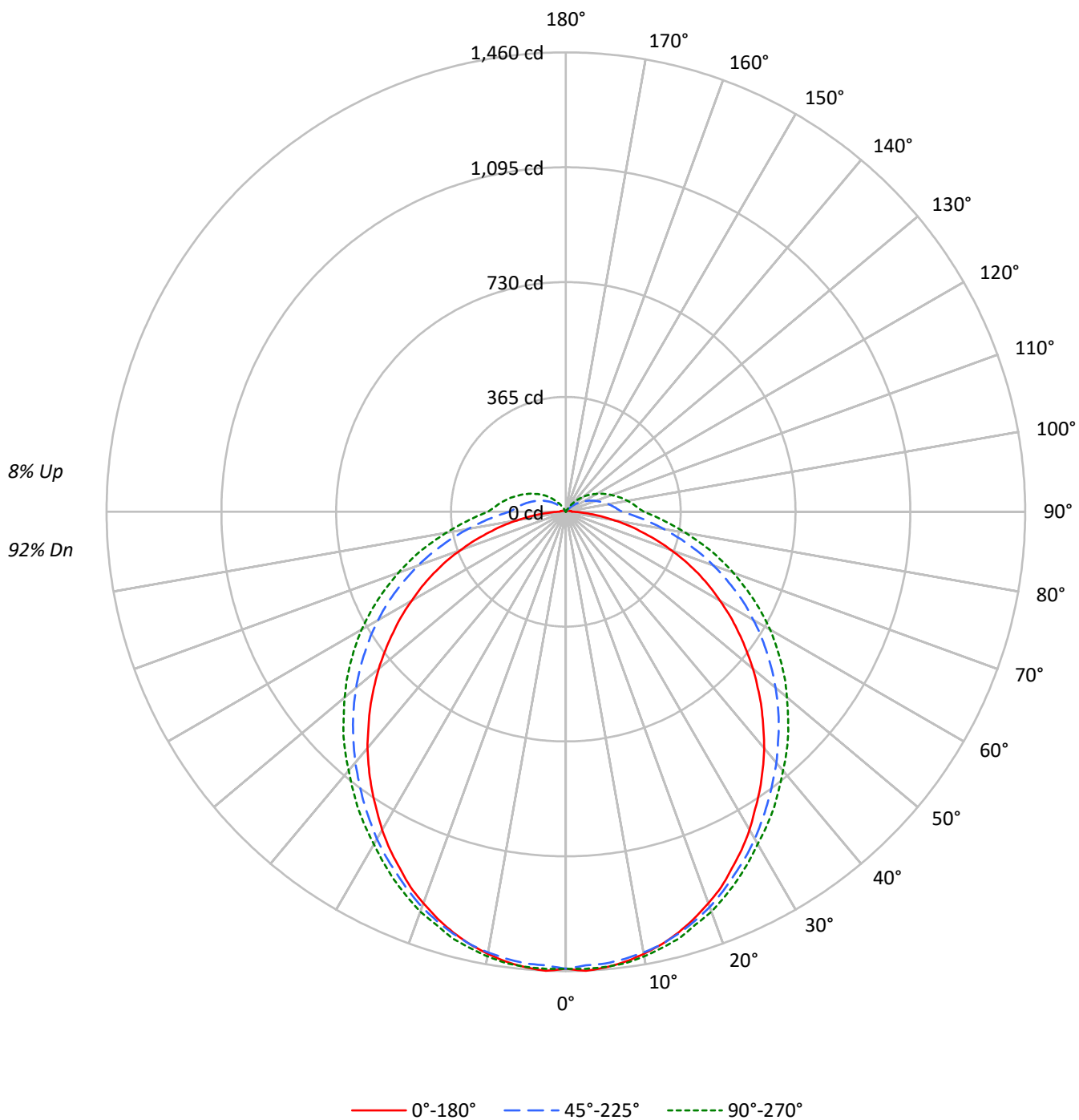
Lumens per Lamp: N/A
Luminaire Lumens: 4881.0 lumens
Efficiency: N/A
Efficacy: 79.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 61.3
Input Voltage (V):
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	50	30	10	0
RCR																					
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	94	94	94	92
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76	76	76	76	73
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63	63	63	63	60
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52	52	52	52	50
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45	45	45	45	42
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39	39	39	39	36
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34	34	34	34	32
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30	30	30	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	27	27	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	24	24	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15632	15632	15632
5°	15709	15573	15692
10°	15597	15546	15683
15°	15426	15462	15620
20°	15168	15313	15495
25°	14843	15088	15333
30°	14512	14925	15161
35°	14136	14739	15134
40°	13783	14627	15094
45°	13390	14571	15221
50°	13008	14570	15366
55°	12588	14638	15676
60°	12193	14815	16144
65°	11805	15152	16762
70°	11204	15733	17826
75°	10460	16843	19804
80°	9707	19613	23927
85°	9571	29702	38298

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 68330 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.8	2.8
10°-20°	392.8	8.0
20°-30°	587.3	12.0
30°-40°	701.2	14.4
40°-50°	733.7	15.0
50°-60°	688.5	14.1
60°-70°	575.1	11.8
70°-80°	411.2	8.4
80°-90°	244.7	5.0
90°-100°	153.8	3.2
100°-110°	113.0	2.3
110°-120°	75.5	1.5
120°-130°	43.1	0.9
130°-140°	19.3	0.4
140°-150°	4.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1117.9	22.9
0°-40°	1819.1	37.3
0°-60°	3241.3	66.4
0°-90°	4472.3	91.6
90°-120°	342.2	7.0
90°-150°	408.7	8.4
90°-180°	409.0	8.4
0°-180°	4881.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1452	1452	1452	1452	1452	
5°	1454	1451	1441	1454	1452	138
15°	1384	1389	1388	1403	1402	390
25°	1250	1266	1270	1291	1291	576
35°	1076	1101	1122	1145	1152	673
45°	880	918	957	987	1000	678
55°	671	723	780	823	835	601
65°	464	525	595	642	658	458
75°	252	326	405	457	476	269
85°	78	157	240	294	310	80
90°	21	98	179	233	248	15
95°	17	79	157	206	222	14
105°	13	51	119	163	177	13
115°	8	27	84	122	134	8
125°	5	5	51	84	95	5
135°	3	2	19	48	55	2
145°	2	0	0	13	19	1
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1452.3	1452.3	1452.3	1452.3	1452.3
2.5°	1460.3	1455.5	1442.8	1455.5	1453.9
5°	1453.9	1450.8	1441.3	1453.9	1452.3
7.5°	1442.8	1442.8	1433.4	1449.2	1447.6
10°	1427.0	1430.2	1422.3	1438.1	1434.9
12.5°	1408.0	1412.8	1408.0	1422.3	1419.1
15°	1384.3	1389.1	1387.5	1403.3	1401.7
17.5°	1355.8	1365.3	1363.7	1378.0	1374.8
20°	1324.2	1333.7	1336.8	1351.1	1352.7
22.5°	1291.0	1300.5	1305.2	1324.2	1322.6
25°	1249.8	1265.7	1270.4	1291.0	1291.0
27.5°	1210.3	1227.7	1237.2	1254.6	1256.2
30°	1167.6	1188.1	1200.8	1219.8	1219.8
32.5°	1120.1	1143.8	1161.2	1181.8	1186.6
35°	1075.8	1101.1	1121.7	1145.4	1151.7
37.5°	1028.3	1056.8	1080.6	1107.4	1112.2
40°	980.9	1009.4	1041.0	1067.9	1074.2
42.5°	928.7	965.1	998.3	1028.3	1037.8
45°	879.6	917.6	957.2	987.2	999.9
47.5°	827.4	870.1	914.4	947.7	957.2
50°	776.8	821.1	870.1	906.5	917.6
52.5°	723.0	770.5	825.8	863.8	878.0
55°	670.8	723.0	780.0	822.7	835.3
57.5°	620.2	674.0	735.7	778.4	792.6
60°	566.4	623.3	688.2	732.5	749.9
62.5°	515.8	574.3	643.9	688.2	704.0
65°	463.5	525.2	594.9	642.3	658.1
67.5°	411.3	476.2	545.8	598.0	610.7
70°	356.0	424.0	499.9	550.6	566.4
72.5°	305.3	373.4	452.5	504.7	520.5
75°	251.5	325.9	405.0	457.2	476.2
77.5°	205.7	280.0	359.1	414.5	428.7
80°	156.6	234.1	316.4	370.2	386.0
82.5°	113.9	193.0	276.9	330.7	346.5
85°	77.5	156.6	240.5	294.3	310.1
87.5°	47.5	126.6	207.3	261.0	276.9
90°	20.6	98.1	178.8	232.6	248.4
92.5°	19.0	87.0	166.1	218.3	232.6
95°	17.4	79.1	156.6	205.7	221.5
97.5°	15.8	72.8	147.1	194.6	210.4
100°	14.2	64.9	137.6	183.5	199.3
102.5°	12.7	57.0	128.1	172.4	188.3
105°	12.7	50.6	118.7	163.0	177.2
107.5°	11.1	44.3	109.2	151.9	166.1
110°	9.5	38.0	101.3	142.4	155.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9.5	31.6	91.8	131.3	145.6
115°	7.9	26.9	83.8	121.8	134.5
117.5°	7.9	20.6	74.4	112.3	125.0
120°	6.3	14.2	66.4	102.8	113.9
122.5°	6.3	9.5	58.5	93.3	104.4
125°	4.7	4.7	50.6	83.8	94.9
127.5°	4.7	3.2	42.7	74.4	85.4
130°	4.7	3.2	34.8	64.9	74.4
132.5°	3.2	3.2	26.9	55.4	66.4
135°	3.2	1.6	19.0	47.5	55.4
137.5°	3.2	1.6	12.7	38.0	45.9
140°	1.6	1.6	6.3	30.1	38.0
142.5°	1.6	0.0	0.0	20.6	28.5
145°	1.6	0.0	0.0	12.7	19.0
147.5°	0.0	0.0	0.0	4.7	11.1
150°	0.0	0.0	0.0	0.0	3.2
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)