

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: P242617

Luminaire Tested: S124DRP-S1195D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242617
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-S1195D930-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

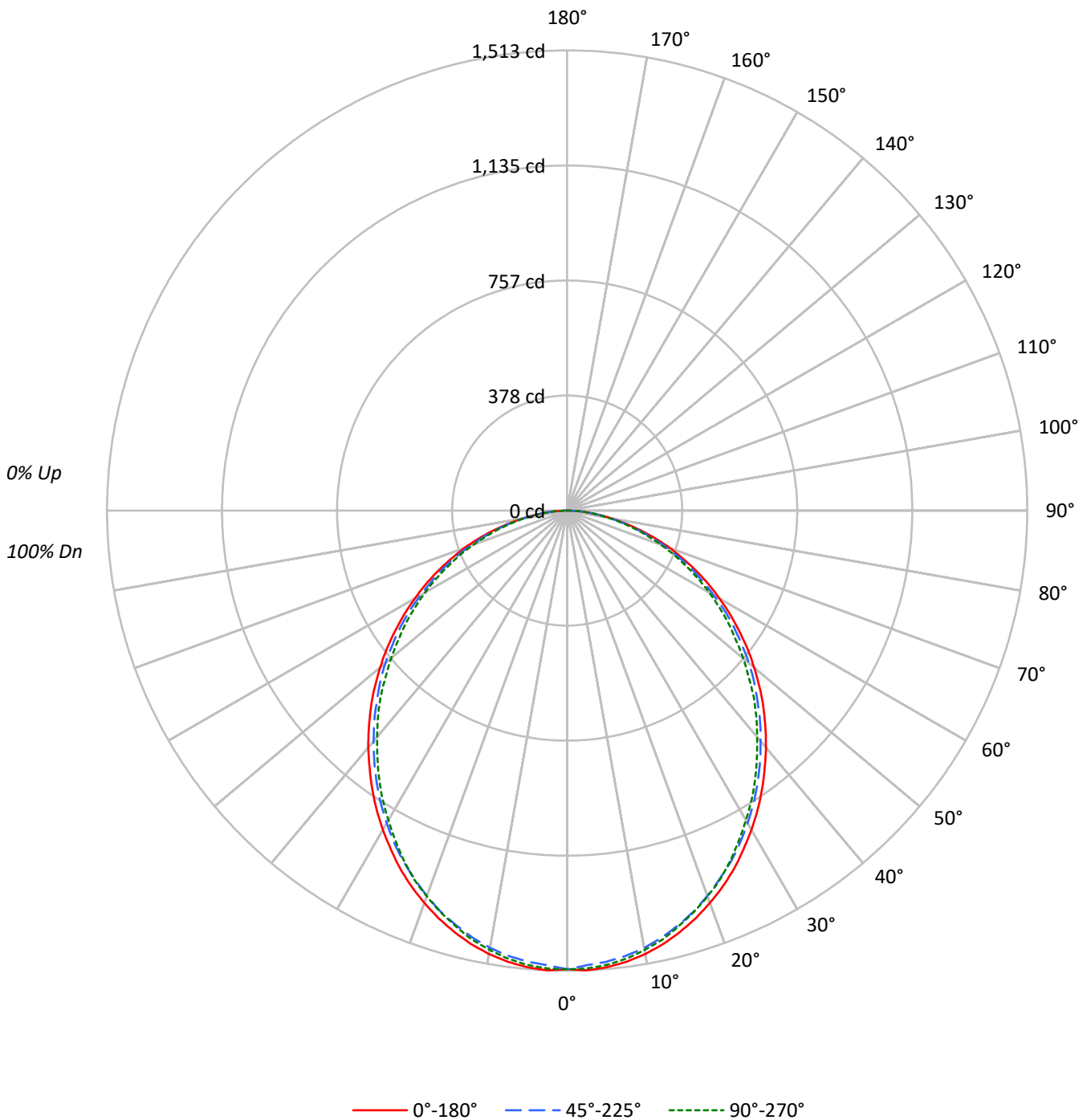
Lumens per Lamp: N/A
Luminaire Lumens: 3870.6 lumens
Efficiency: N/A
Efficacy: 94.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
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	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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84																												
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70																												
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60																												
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51																												
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44																												
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39																												
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35																												
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31																												
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28																												
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13404	13404	13404
5°	13445	13283	13380
10°	13360	13175	13240
15°	13199	12987	13022
20°	12985	12756	12767
25°	12740	12491	12456
30°	12440	12179	12067
35°	12129	11853	11696
40°	11806	11483	11273
45°	11468	11119	10906
50°	11095	10795	10460
55°	10693	10374	10038
60°	10290	9902	9602
65°	9835	9454	9074
70°	9328	8857	8512
75°	8548	8133	7927
80°	7607	7300	7115
85°	6660	6405	6283

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11468 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.1	3.7
10°-20°	400.4	10.3
20°-30°	589.3	15.2
30°-40°	685.1	17.7
40°-50°	685.0	17.7
50°-60°	599.1	15.5
60°-70°	444.8	11.5
70°-80°	252.4	6.5
80°-90°	72.3	1.9
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°	1131.9	29.2
0°-40°	1817.0	46.9
0°-60°	3101.1	80.1
0°-90°	3870.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3870.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1508	1508	1508	1508	1508	
5°	1507	1502	1489	1502	1500	143
15°	1434	1430	1411	1419	1415	404
25°	1299	1290	1274	1275	1270	598
35°	1118	1109	1092	1084	1078	699
45°	912	904	884	871	868	703
55°	690	686	669	655	648	618
65°	468	462	450	437	431	463
75°	249	243	237	232	231	264
85°	65	65	63	63	62	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1508.0	1508.0	1508.0	1508.0	1508.0
2.5°	1512.8	1509.2	1495.9	1508.0	1506.8
5°	1506.8	1502.0	1488.7	1502.0	1499.5
7.5°	1495.9	1491.1	1476.6	1487.5	1486.3
10°	1480.2	1475.4	1459.7	1469.3	1466.9
12.5°	1459.7	1454.8	1437.9	1448.8	1445.2
15°	1434.3	1429.5	1411.3	1418.6	1415.0
17.5°	1405.3	1399.3	1382.3	1387.2	1384.8
20°	1372.7	1366.6	1348.5	1352.1	1349.7
22.5°	1337.6	1329.2	1311.0	1318.3	1313.5
25°	1299.0	1290.5	1273.6	1274.8	1270.0
27.5°	1255.5	1247.0	1231.3	1228.9	1222.8
30°	1212.0	1202.3	1186.6	1181.8	1175.7
32.5°	1166.0	1157.6	1140.7	1134.6	1128.6
35°	1117.7	1109.3	1092.3	1083.9	1077.8
37.5°	1067.0	1059.7	1041.6	1033.1	1024.7
40°	1017.4	1007.8	989.6	977.5	971.5
42.5°	964.3	959.4	938.9	924.4	920.8
45°	912.3	903.8	884.5	871.2	867.6
47.5°	857.9	851.9	833.8	819.3	809.6
50°	802.3	797.5	780.6	763.7	756.4
52.5°	748.0	741.9	723.8	709.3	699.6
55°	690.0	686.3	669.4	654.9	647.7
57.5°	635.6	632.0	615.0	600.5	593.3
60°	578.8	572.8	557.0	546.2	540.1
62.5°	523.2	518.4	501.5	491.8	485.8
65°	467.6	461.6	449.5	437.4	431.4
67.5°	410.8	406.0	393.9	381.8	380.6
70°	358.9	350.4	340.8	331.1	327.5
72.5°	303.3	294.8	287.6	280.3	276.7
75°	248.9	242.9	236.8	232.0	230.8
77.5°	195.8	193.3	187.3	186.1	182.5
80°	148.6	145.0	142.6	140.2	139.0
82.5°	102.7	101.5	101.5	100.3	99.1
85°	65.3	65.3	62.8	62.8	61.6
87.5°	31.4	30.2	29.0	29.0	29.0
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	20.32	21.93	20.68	22.25	22.56	19.94	21.56	20.31	21.87	22.18
	3H	22.08	23.54	22.45	23.86	24.22	21.65	23.11	22.03	23.44	23.80
	4H	22.73	24.10	23.13	24.45	24.83	22.30	23.67	22.70	24.02	24.39
	6H	23.21	24.48	23.62	24.84	25.23	22.77	24.05	23.18	24.41	24.80
	8H	23.36	24.57	23.78	24.96	25.36	22.93	24.15	23.36	24.53	24.93
	12H	23.46	24.63	23.89	25.01	25.44	23.04	24.20	23.47	24.59	25.01
4H	2H	20.89	22.26	21.29	22.61	22.98	20.59	21.96	20.99	22.31	22.69
	3H	22.87	24.02	23.28	24.42	24.82	22.52	23.67	22.93	24.07	24.47
	4H	23.65	24.69	24.08	25.10	25.54	23.29	24.33	23.72	24.74	25.18
	6H	24.25	25.16	24.71	25.60	26.06	23.89	24.80	24.34	25.24	25.69
	8H	24.45	25.30	24.91	25.74	26.21	24.09	24.94	24.55	25.39	25.85
	12H	24.60	25.37	25.08	25.84	26.31	24.25	25.01	24.73	25.49	25.96
8H	4H	23.93	24.78	24.39	25.22	25.68	23.60	24.46	24.07	24.90	25.36
	6H	24.65	25.36	25.14	25.84	26.32	24.33	25.04	24.82	25.52	26.00
	8H	24.92	25.55	25.43	26.06	26.55	24.61	25.24	25.12	25.75	26.24
	12H	25.15	25.71	25.65	26.20	26.76	24.84	25.40	25.35	25.89	26.45
12H	4H	23.95	24.72	24.43	25.19	25.66	23.64	24.40	24.12	24.88	25.35
	6H	24.70	25.33	25.21	25.84	26.33	24.39	25.02	24.90	25.53	26.02
	8H	25.03	25.59	25.53	26.08	26.64	24.73	25.29	25.24	25.78	26.34