

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P242626

Luminaire Tested: **S124DR-S1020D940-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242626  
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 (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DR-S1020D940-X4F0-XX-UDD-F-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3642.6 lumens  
Efficiency: N/A  
Efficacy: 104.7 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

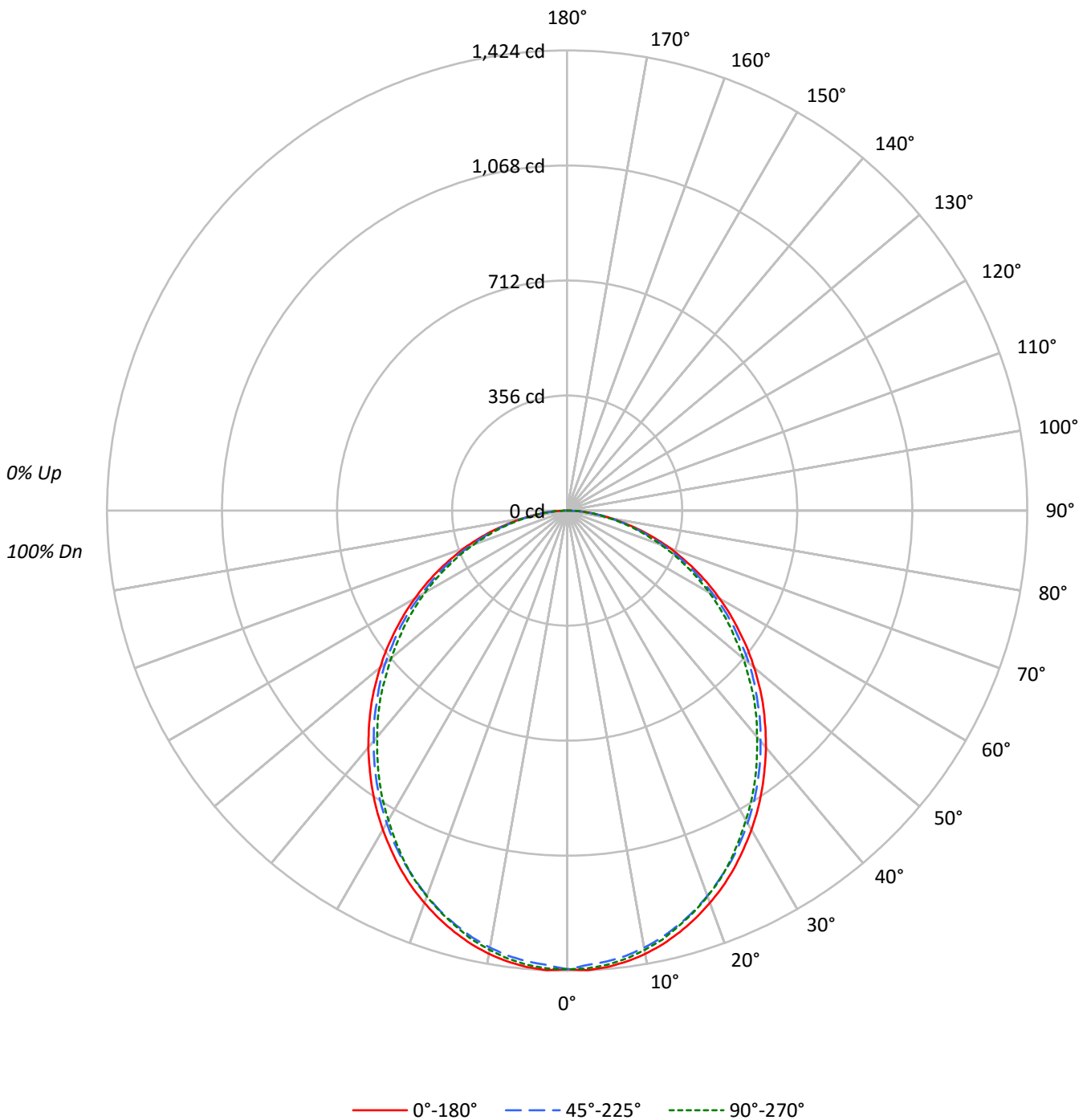
Input Watts (W): 34.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	12615	12615	12615
5°	12653	12501	12592
10°	12573	12399	12460
15°	12422	12223	12254
20°	12220	12005	12015
25°	11989	11756	11721
30°	11707	11462	11356
35°	11415	11155	11007
40°	11110	10806	10609
45°	10793	10464	10264
50°	10442	10159	9845
55°	10062	9763	9446
60°	9684	9319	9036
65°	9257	8897	8539
70°	8777	8335	8010
75°	8047	7655	7460
80°	7161	6870	6696
85°	6262	6028	5915



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.8	3.7
10°-20°	376.9	10.3
20°-30°	554.6	15.2
30°-40°	644.7	17.7
40°-50°	644.7	17.7
50°-60°	563.8	15.5
60°-70°	418.6	11.5
70°-80°	237.5	6.5
80°-90°	68.0	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°	1065.2	29.2
0°-40°	1710.0	46.9
0°-60°	2918.4	80.1
0°-90°	3642.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3642.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1419	1419	1419	1419	1419	
5°	1418	1414	1401	1414	1411	135
15°	1350	1345	1328	1335	1332	380
25°	1222	1214	1199	1200	1195	563
35°	1052	1044	1028	1020	1014	658
45°	859	851	832	820	816	662
55°	649	646	630	616	610	582
65°	440	434	423	412	406	436
75°	234	229	223	218	217	249
85°	61	61	59	59	58	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1419.2	1419.2	1419.2	1419.2	1419.2
2.5°	1423.7	1420.3	1407.8	1419.2	1418.0
5°	1418.0	1413.5	1401.0	1413.5	1411.2
7.5°	1407.8	1403.2	1389.6	1399.8	1398.7
10°	1393.0	1388.5	1373.7	1382.8	1380.5
12.5°	1373.7	1369.1	1353.2	1363.4	1360.0
15°	1349.8	1345.3	1328.2	1335.0	1331.6
17.5°	1322.5	1316.8	1300.9	1305.5	1303.2
20°	1291.8	1286.1	1269.1	1272.5	1270.2
22.5°	1258.8	1250.9	1233.8	1240.6	1236.1
25°	1222.4	1214.5	1198.6	1199.7	1195.1
27.5°	1181.5	1173.5	1158.8	1156.5	1150.8
30°	1140.6	1131.5	1116.7	1112.1	1106.4
32.5°	1097.4	1089.4	1073.5	1067.8	1062.1
35°	1051.9	1043.9	1028.0	1020.0	1014.3
37.5°	1004.1	997.3	980.2	972.3	964.3
40°	957.5	948.4	931.3	920.0	914.3
42.5°	907.4	902.9	883.6	869.9	866.5
45°	858.6	850.6	832.4	819.9	816.5
47.5°	807.4	801.7	784.6	771.0	761.9
50°	755.1	750.5	734.6	718.7	711.9
52.5°	703.9	698.2	681.2	667.5	658.4
55°	649.3	645.9	630.0	616.3	609.5
57.5°	598.1	594.7	578.8	565.2	558.3
60°	544.7	539.0	524.2	514.0	508.3
62.5°	492.4	487.8	471.9	462.8	457.1
65°	440.1	434.4	423.0	411.6	406.0
67.5°	386.6	382.1	370.7	359.3	358.2
70°	337.7	329.8	320.7	311.6	308.2
72.5°	285.4	277.5	270.6	263.8	260.4
75°	234.3	228.6	222.9	218.3	217.2
77.5°	184.2	181.9	176.3	175.1	171.7
80°	139.9	136.5	134.2	131.9	130.8
82.5°	96.7	95.5	95.5	94.4	93.2
85°	61.4	61.4	59.1	59.1	58.0
87.5°	29.6	28.4	27.3	27.3	27.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)