

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: P243486

Luminaire Tested: **S124DR-H1020D940-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243486  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-84)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DR-H1020D940-X4F0-XX-UDD-F-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3638.3 lumens  
Efficiency: N/A  
Efficacy: 115.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct

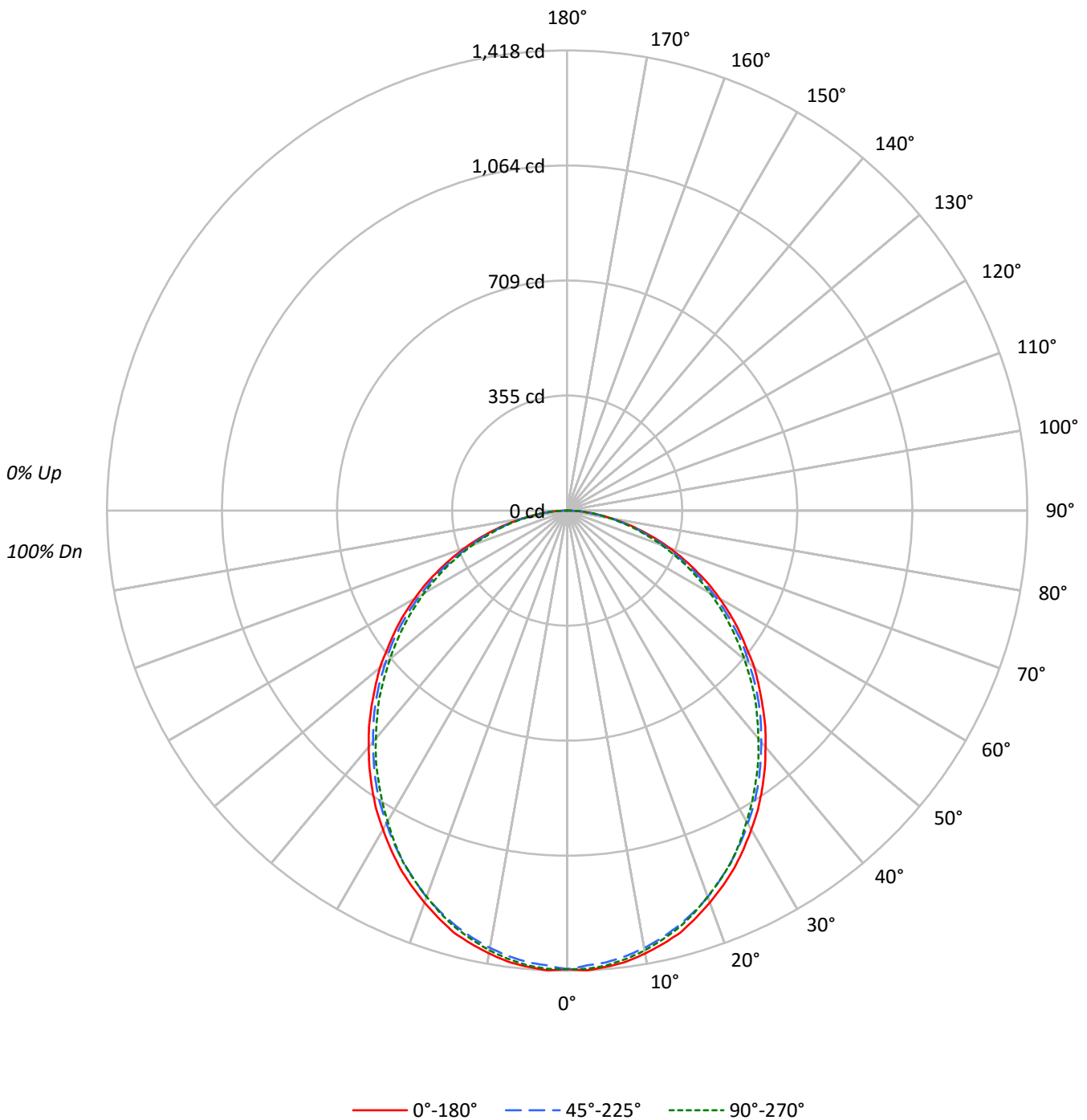
Input Watts (W): 31.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	46	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	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	27	39	32	27	38	32	27	37	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	12563	12563	12563
5°	12590	12467	12549
10°	12507	12352	12424
15°	12392	12191	12244
20°	12162	11988	11977
25°	11933	11718	11730
30°	11650	11426	11355
35°	11368	11143	11007
40°	11035	10795	10635
45°	10712	10495	10293
50°	10416	10114	9860
55°	10033	9766	9463
60°	9650	9323	9036
65°	9191	8876	8586
70°	8696	8309	8039
75°	8016	7700	7463
80°	7064	6946	6767
85°	6211	6211	6099



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.3	3.7
10°-20°	375.7	10.3
20°-30°	553.3	15.2
30°-40°	643.7	17.7
40°-50°	644.0	17.7
50°-60°	563.2	15.5
60°-70°	418.3	11.5
70°-80°	238.3	6.5
80°-90°	68.6	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°	1062.2	29.2
0°-40°	1705.9	46.9
0°-60°	2913.1	80.1
0°-90°	3638.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3638.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1413	1413	1413	1413	1413	
5°	1411	1409	1397	1408	1406	134
15°	1347	1340	1325	1333	1330	379
25°	1217	1211	1195	1198	1196	560
35°	1048	1038	1027	1018	1014	655
45°	852	849	835	822	819	658
55°	647	643	630	616	611	579
65°	437	434	422	413	408	434
75°	233	229	224	220	217	248
85°	61	60	61	59	60	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1413.3	1413.3	1413.3	1413.3	1413.3
2.5°	1417.9	1414.5	1403.0	1414.5	1413.3
5°	1411.0	1408.7	1397.2	1407.6	1406.4
7.5°	1401.8	1397.2	1384.6	1394.9	1393.8
10°	1385.7	1382.3	1368.5	1378.8	1376.5
12.5°	1367.3	1363.9	1348.9	1357.0	1354.7
15°	1346.6	1339.7	1324.8	1332.8	1330.5
17.5°	1316.7	1312.1	1297.2	1304.1	1300.6
20°	1285.7	1279.9	1267.3	1268.4	1266.1
22.5°	1252.3	1246.6	1231.6	1236.2	1231.6
25°	1216.7	1210.9	1194.8	1198.3	1196.0
27.5°	1176.4	1170.7	1155.7	1156.9	1152.3
30°	1135.0	1128.1	1113.2	1112.0	1106.3
32.5°	1093.6	1086.7	1071.8	1067.2	1061.4
35°	1047.6	1038.4	1026.9	1017.7	1014.3
37.5°	1000.5	995.9	978.6	972.9	968.3
40°	951.0	946.4	930.3	922.3	916.5
42.5°	903.9	898.1	883.2	871.7	867.1
45°	852.1	848.7	834.9	822.2	818.8
47.5°	801.5	800.4	783.1	770.5	764.7
50°	753.2	746.3	731.4	719.9	713.0
52.5°	696.9	695.7	683.1	668.1	662.4
55°	647.4	642.8	630.2	616.4	610.6
57.5°	595.7	593.4	577.3	565.8	560.0
60°	542.8	538.2	524.4	514.0	508.3
62.5°	492.2	486.4	473.8	463.4	457.7
65°	437.0	433.5	422.0	412.8	408.2
67.5°	385.2	380.6	369.1	361.1	356.5
70°	334.6	327.7	319.7	312.8	309.3
72.5°	284.0	278.3	271.4	266.8	262.2
75°	233.4	228.8	224.2	219.6	217.3
77.5°	185.1	180.5	178.2	177.1	174.8
80°	138.0	135.7	135.7	134.5	132.2
82.5°	97.7	95.4	95.4	95.4	94.3
85°	60.9	59.8	60.9	58.6	59.8
87.5°	28.7	28.7	29.9	28.7	29.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)