

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: P242867

Luminaire Tested: **S125DR-S1090D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242867  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DR-S1090D940-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3593.1 lumens  
Efficiency: N/A  
Efficacy: 103.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')  
CIE Type: Direct

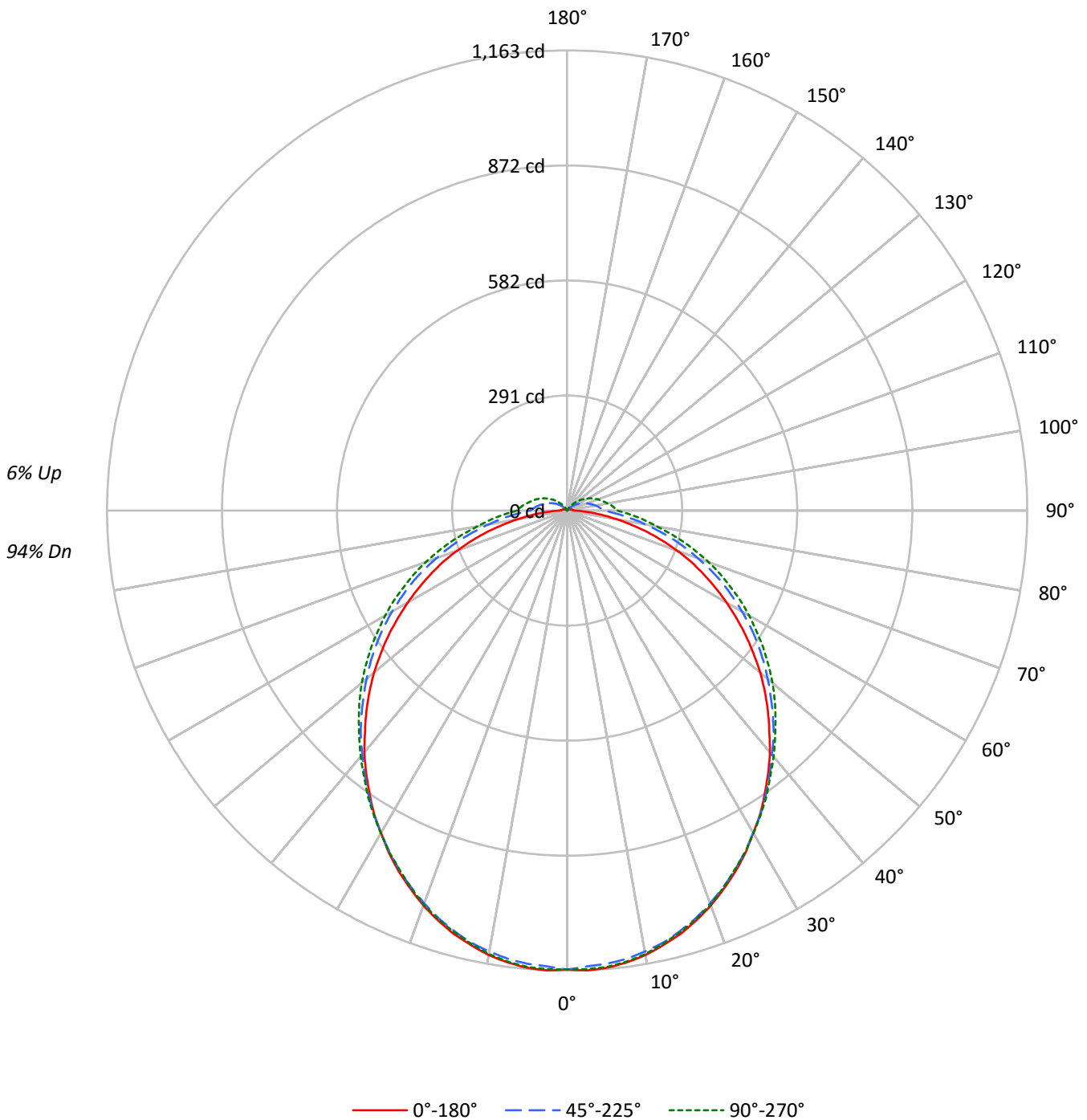
Input Watts (W): 34.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	106	101	96	92	103	98	94	90	93	89	86	88	85	82	83	81	79	76
2	96	88	80	74	93	85	78	73	81	75	70	76	72	68	72	69	65	63
3	88	77	68	61	84	75	67	60	71	64	59	67	61	57	64	59	55	53
4	80	68	59	52	77	66	58	51	63	55	50	60	53	48	57	51	47	45
5	74	60	51	44	71	59	50	44	56	49	43	53	47	42	51	45	41	39
6	68	54	45	39	66	53	45	38	51	43	38	48	42	37	46	40	36	34
7	63	49	40	34	61	48	40	34	46	39	33	44	37	33	42	36	32	30
8	59	45	36	30	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	23	22

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

	0°	45°	90°
0°	8244	8244	8244
5°	8260	8085	8108
10°	8201	7934	7917
15°	8103	7755	7677
20°	7971	7535	7439
25°	7814	7301	7146
30°	7623	7043	6881
35°	7446	6806	6636
40°	7264	6557	6390
45°	7060	6342	6171
50°	6865	6109	5975
55°	6630	5889	5747
60°	6374	5637	5512
65°	6106	5374	5250
70°	5802	5015	4977
75°	5318	4667	4643
80°	4688	4244	4276
85°	4091	3938	4128



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.8	3.1
10°-20°	311.6	8.7
20°-30°	463.3	12.9
30°-40°	548.7	15.3
40°-50°	567.3	15.8
50°-60°	522.6	14.5
60°-70°	422.5	11.8
70°-80°	282.7	7.9
80°-90°	146.1	4.1
90°-100°	82.3	2.3
100°-110°	60.7	1.7
110°-120°	40.6	1.1
120°-130°	23.0	0.6
130°-140°	10.1	0.3
140°-150°	2.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	884.7	24.6
0°-40°	1433.4	39.9
0°-60°	2523.3	70.2
0°-90°	3374.5	93.9
90°-120°	183.6	5.1
90°-150°	218.6	6.1
90°-180°	219.0	6.1
0°-180°	3593.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1160	1160	1160	1160	1160	
5°	1160	1158	1150	1159	1158	110
15°	1108	1109	1101	1108	1103	312
25°	1006	1010	1003	1008	1002	463
35°	871	879	876	879	879	545
45°	718	730	736	744	745	554
55°	552	570	588	600	605	493
65°	380	406	433	450	455	377
75°	209	239	275	298	304	222
85°	62	100	140	165	174	65
90°	18	55	93	119	127	13
95°	15	44	83	108	116	12
105°	10	28	62	85	93	11
115°	7	15	44	65	72	7
125°	4	3	26	44	50	4
135°	2	1	9	24	30	2
145°	1	0	0	6	10	0
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



TEST NUMBER: P242867

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1159.9	1159.9	1159.9	1159.9	1159.9
2.5°	1163.3	1161.0	1153.1	1161.0	1159.9
5°	1159.9	1157.6	1149.7	1158.8	1157.6
7.5°	1151.9	1150.8	1142.8	1150.8	1149.7
10°	1140.6	1140.6	1131.5	1139.4	1138.3
12.5°	1124.6	1125.8	1119.0	1124.6	1121.2
15°	1107.6	1108.7	1100.8	1107.6	1103.0
17.5°	1086.0	1088.3	1080.3	1086.0	1082.6
20°	1062.1	1064.4	1056.4	1059.8	1059.8
22.5°	1034.8	1039.4	1030.3	1034.8	1031.4
25°	1006.4	1009.8	1003.0	1007.5	1001.8
27.5°	975.7	980.2	972.3	975.7	973.4
30°	940.4	947.2	940.4	942.7	941.6
32.5°	908.6	914.3	909.7	912.0	910.9
35°	871.1	879.0	875.6	879.0	879.0
37.5°	834.7	841.5	840.4	844.9	843.8
40°	797.1	806.2	805.1	809.7	811.9
42.5°	756.2	768.7	772.1	777.8	777.8
45°	717.5	730.1	735.7	743.7	744.8
47.5°	677.7	689.1	698.2	709.6	711.9
50°	636.8	649.3	661.8	674.3	677.7
52.5°	593.6	609.5	625.4	639.1	641.4
55°	551.5	569.7	587.9	600.4	605.0
57.5°	508.3	529.9	550.4	564.0	567.4
60°	465.1	487.8	510.6	527.6	531.0
62.5°	423.0	445.8	470.8	490.1	494.7
65°	379.8	406.0	433.3	450.3	454.9
67.5°	340.0	365.0	392.3	412.8	418.5
70°	295.7	321.8	351.4	373.0	379.8
72.5°	252.4	279.7	312.7	336.6	341.1
75°	209.2	238.8	275.2	297.9	303.6
77.5°	167.2	201.3	235.4	260.4	265.0
80°	128.5	162.6	201.3	226.3	230.8
82.5°	93.2	129.6	169.4	193.3	202.4
85°	62.5	100.1	139.9	164.9	174.0
87.5°	39.8	76.2	114.9	141.0	149.0
90°	18.2	54.6	93.2	119.4	127.4
92.5°	15.9	48.9	88.7	113.7	121.7
95°	14.8	44.3	83.0	108.0	116.0
97.5°	13.6	40.9	78.5	102.3	110.3
100°	12.5	36.4	72.8	96.7	103.5
102.5°	11.4	33.0	68.2	91.0	97.8
105°	10.2	28.4	62.5	85.3	93.2
107.5°	9.1	25.0	58.0	80.7	87.6
110°	8.0	21.6	53.4	75.1	83.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	8.0	18.2	48.9	69.4	77.3
115°	6.8	14.8	44.3	64.8	71.6
117.5°	5.7	11.4	39.8	59.1	67.1
120°	5.7	9.1	35.3	54.6	61.4
122.5°	4.5	5.7	30.7	48.9	55.7
125°	4.5	3.4	26.2	44.3	50.0
127.5°	3.4	2.3	21.6	38.7	45.5
130°	3.4	2.3	18.2	34.1	39.8
132.5°	2.3	2.3	13.6	29.6	34.1
135°	2.3	1.1	9.1	23.9	29.6
137.5°	2.3	1.1	5.7	19.3	23.9
140°	1.1	1.1	2.3	14.8	19.3
142.5°	1.1	0.0	0.0	10.2	14.8
145°	1.1	0.0	0.0	5.7	10.2
147.5°	0.0	0.0	0.0	2.3	4.5
150°	0.0	0.0	0.0	0.0	1.1
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)