

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: P243067

Luminaire Tested: **S121RDR-H685D935-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243067  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-62)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121RDR-H685D935-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1764.1 lumens  
Efficiency: N/A  
Efficacy: 74.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 0.92 / 1.09  
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')  
CIE Type: Direct

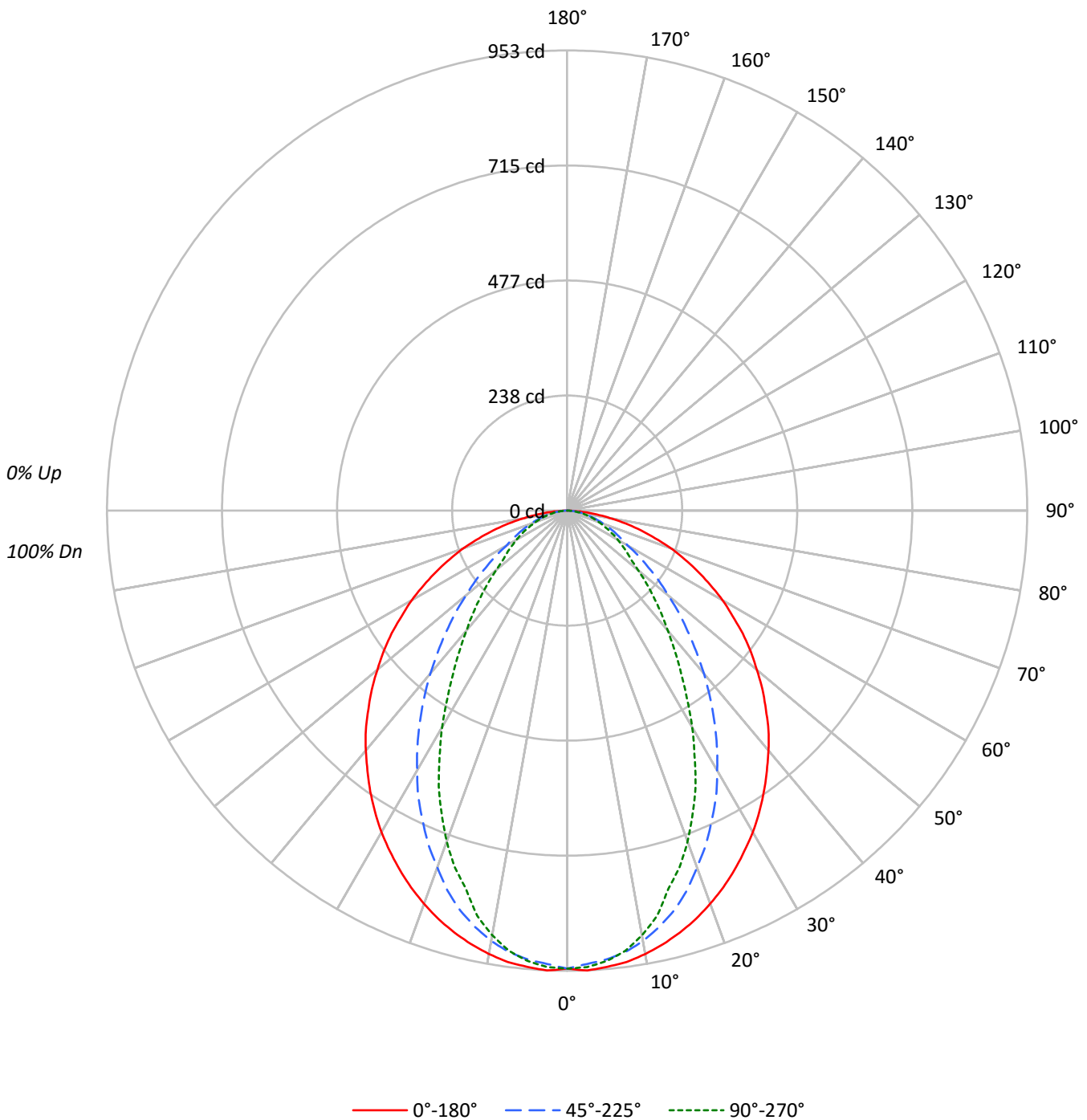
Input Watts (W): 23.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89				87	
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77				75	
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67				65	
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59				57	
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52				50	
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47				45	
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42				41	
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39				37	
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35				34	
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32				31	

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

	0°	45°	90°
0°	28107	28107	28107
5°	28214	27759	27854
10°	28056	27235	26871
15°	27742	26288	24856
20°	27325	24790	22989
25°	26834	23153	20580
30°	26320	21260	17712
35°	25703	19221	14888
40°	25091	17038	12532
45°	24387	14787	10610
50°	23642	12598	8818
55°	22926	10631	7847
60°	22056	8622	7194
65°	20970	7719	6597
70°	19847	6965	6056
75°	18134	6262	5518
80°	15493	5494	4931
85°	12035	4657	4114



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.8	5.0
10°-20°	241.4	13.7
20°-30°	329.4	18.7
30°-40°	341.4	19.4
40°-50°	297.9	16.9
50°-60°	224.2	12.7
60°-70°	147.0	8.3
70°-80°	74.9	4.2
80°-90°	19.0	1.1
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°	659.6	37.4
0°-40°	1001.0	56.7
0°-60°	1523.1	86.3
0°-90°	1764.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1764.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	949	949	949	949	949	
5°	949	944	933	939	936	90
15°	904	892	857	833	810	255
25°	821	787	708	649	630	378
35°	711	650	531	442	412	444
45°	582	498	353	274	253	450
55°	444	338	206	156	152	396
65°	299	186	110	97	94	296
75°	158	72	55	50	48	167
85°	35	14	14	12	12	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	948.6	948.6	948.6	948.6	948.6
2.5°	953.4	949.4	939.8	947.8	946.2
5°	948.6	943.8	933.3	939.0	936.5
7.5°	943.0	936.5	922.1	924.5	919.7
10°	932.5	924.5	905.2	900.4	893.1
12.5°	919.7	910.8	882.7	871.4	860.2
15°	904.4	891.5	857.0	832.8	810.3
17.5°	886.7	870.6	824.8	791.0	774.2
20°	866.6	845.7	786.2	746.8	729.1
22.5°	844.9	818.4	750.0	700.2	679.3
25°	820.8	787.0	708.2	648.7	629.5
27.5°	795.1	756.5	668.0	599.7	571.6
30°	769.3	721.1	621.4	545.0	517.7
32.5°	740.4	685.7	577.2	492.8	462.2
35°	710.6	649.6	531.4	442.1	411.6
37.5°	679.3	613.4	485.6	395.5	365.8
40°	648.7	574.0	440.5	350.5	324.0
42.5°	617.4	534.6	395.5	311.1	288.6
45°	582.0	497.6	352.9	274.1	253.2
47.5°	549.1	457.4	314.3	241.2	221.9
50°	512.9	418.0	273.3	210.6	191.3
52.5°	479.1	377.8	239.6	178.5	166.4
55°	443.8	337.6	205.8	156.0	151.9
57.5°	406.0	298.2	176.1	139.9	135.1
60°	372.2	260.5	145.5	125.4	121.4
62.5°	334.4	222.7	126.2	111.7	107.7
65°	299.1	186.5	110.1	97.3	94.1
67.5°	263.7	153.5	94.9	84.4	81.2
70°	229.1	122.2	80.4	72.4	69.9
72.5°	191.3	92.4	67.5	61.1	59.5
75°	158.4	72.4	54.7	49.8	48.2
77.5°	123.8	54.7	42.6	39.4	38.6
80°	90.8	39.4	32.2	29.7	28.9
82.5°	61.9	26.5	22.5	20.9	20.1
85°	35.4	14.5	13.7	12.1	12.1
87.5°	13.7	5.6	4.8	4.8	4.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)