

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: P242155

Luminaire Tested: **S121DR-S880D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242155
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-13)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S121DR-S880D830-X4F0-XX-UDD-D-W
Description: DEFINE 1 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3284.4 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.34 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.09' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

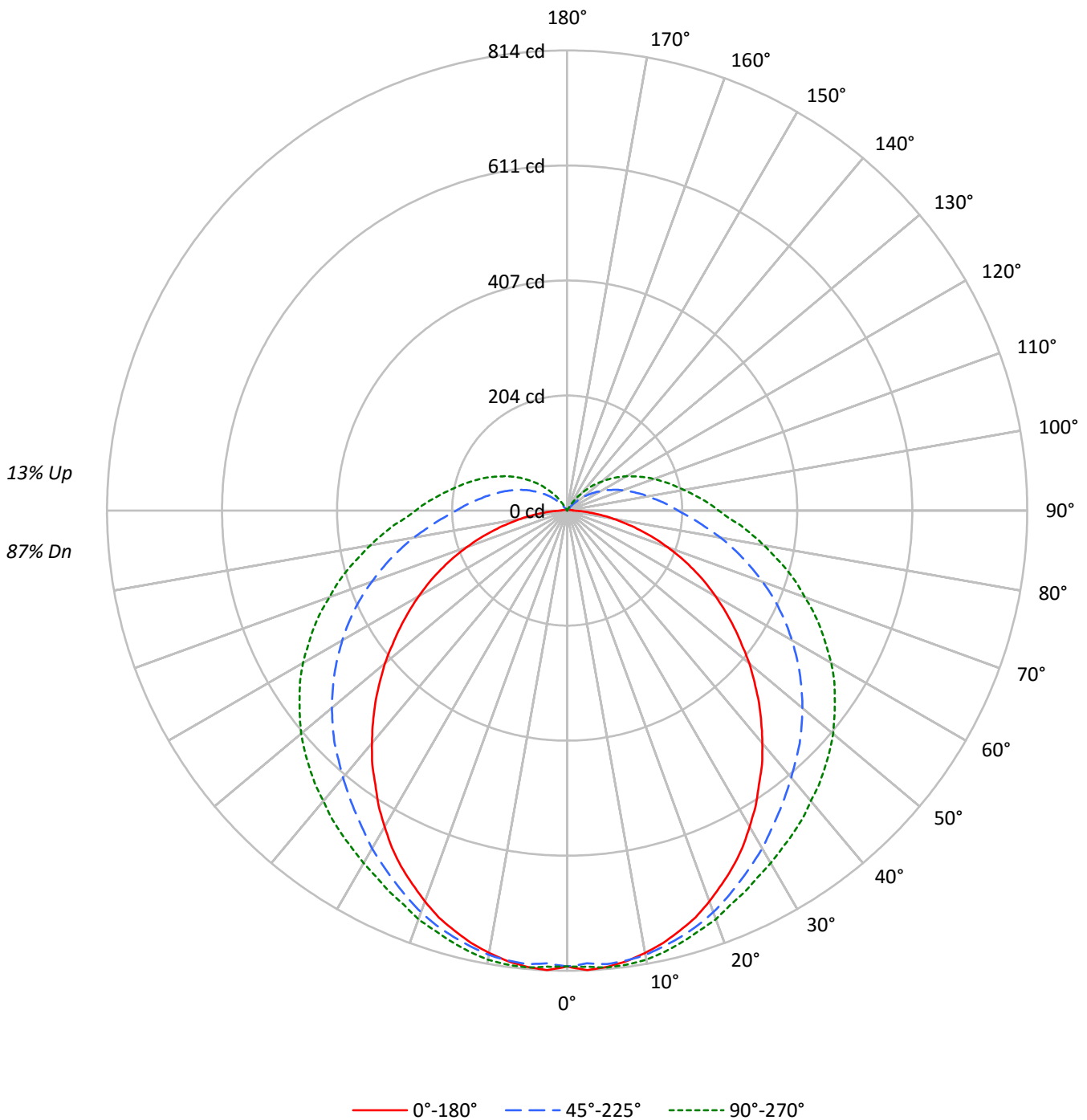
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	116	116	116	116	112	112	112	112	104	104	104	97	97	97	90	90	90	87				87
1	103	97	92	87	99	94	89	84	87	83	79	81	77	75	75	72	70	67				67
2	93	83	75	69	89	80	73	67	74	68	63	69	64	60	64	60	57	54				54
3	84	72	63	56	80	70	61	55	65	58	52	60	54	49	56	51	47	44				44
4	76	63	54	47	73	61	53	46	57	50	44	53	47	42	49	44	40	37				37
5	70	56	47	40	67	54	46	39	51	43	37	47	41	36	44	39	34	32				32
6	65	51	41	34	62	49	40	34	46	38	32	43	36	31	40	34	30	27				27
7	60	46	37	30	57	44	36	30	41	34	28	39	32	27	36	31	26	24				24
8	55	42	33	27	53	40	32	26	38	31	25	36	29	24	33	28	23	21				21
9	52	38	30	24	50	37	29	23	35	28	23	33	26	22	31	25	21	19				19
10	48	35	27	22	47	34	26	21	32	25	20	30	24	20	29	23	19	17				17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23896	23896	23896
5°	24049	22675	22389
10°	23814	21565	20977
15°	23463	20409	19564
20°	23014	19313	18328
25°	22486	18195	17196
30°	21814	17208	16279
35°	21074	16274	15542
40°	20414	15485	14859
45°	19673	14832	14293
50°	18908	14172	13748
55°	18073	13522	13159
60°	17305	12866	12594
65°	16514	12214	11947
70°	15435	11509	11253
75°	14137	10797	10647
80°	12608	10101	9982
85°	10834	9437	9410



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.0	2.3
10°-20°	220.9	6.7
20°-30°	333.9	10.2
30°-40°	408.3	12.4
40°-50°	443.3	13.5
50°-60°	437.3	13.3
60°-70°	392.5	12.0
70°-80°	315.9	9.6
80°-90°	228.2	6.9
90°-100°	163.1	5.0
100°-110°	116.8	3.6
110°-120°	77.9	2.4
120°-130°	44.7	1.4
130°-140°	20.2	0.6
140°-150°	4.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	631.8	19.2
0°-40°	1040.1	31.7
0°-60°	1920.7	58.5
0°-90°	2857.3	87.0
90°-120°	357.7	10.9
90°-150°	427.1	13.0
90°-180°	427.0	13.0
0°-180°	3284.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	806	806	806	806	806	
5°	810	809	805	812	811	77
15°	769	780	780	791	790	217
25°	695	713	724	740	744	320
35°	591	624	653	685	697	371
45°	480	523	582	629	644	370
55°	361	423	502	560	578	323
65°	246	324	415	476	495	244
75°	133	224	321	382	402	142
85°	40	135	232	291	309	42
90°	11	101	196	251	268	8
95°	8	80	170	224	238	6
105°	5	48	124	172	186	6
115°	4	24	86	129	142	4
125°	2	4	53	89	101	2
135°	1	1	20	50	60	1
145°	0	0	0	14	20	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	806.5	806.5	806.5	806.5	806.5
2.5°	813.7	810.1	801.7	810.1	807.7
5°	810.1	808.9	805.3	812.5	811.3
7.5°	804.1	806.5	802.9	812.5	810.1
10°	794.5	800.5	798.1	807.7	806.5
12.5°	783.7	790.9	789.7	800.5	799.3
15°	769.3	780.1	780.1	790.9	789.7
17.5°	754.8	765.7	769.3	781.3	778.9
20°	735.6	750.0	756.0	766.9	769.3
22.5°	715.2	733.2	740.4	753.6	754.8
25°	694.7	712.8	723.6	740.4	744.0
27.5°	671.9	692.3	706.8	726.0	730.8
30°	645.5	670.7	689.9	711.6	720.0
32.5°	620.2	647.9	670.7	699.5	708.0
35°	591.4	623.8	652.7	685.1	697.1
37.5°	566.1	599.8	634.6	671.9	685.1
40°	537.3	573.3	616.6	657.5	670.7
42.5°	508.4	549.3	598.6	644.3	658.7
45°	479.6	522.9	581.8	628.6	644.3
47.5°	449.5	498.8	562.5	613.0	629.8
50°	420.7	473.6	543.3	596.2	614.2
52.5°	389.4	448.3	522.9	578.1	596.2
55°	360.6	423.1	502.4	560.1	578.1
57.5°	331.7	397.9	480.8	539.7	560.1
60°	302.9	372.6	459.2	519.3	539.7
62.5°	275.3	348.6	437.5	498.8	516.8
65°	246.4	324.5	414.7	476.0	495.2
67.5°	217.6	299.3	391.8	453.1	472.4
70°	188.7	272.8	367.8	430.3	447.1
72.5°	161.1	248.8	343.8	407.5	425.5
75°	133.4	223.6	320.9	382.2	401.5
77.5°	107.0	199.5	298.1	359.4	376.2
80°	82.9	175.5	275.3	336.6	353.4
82.5°	60.1	155.1	252.4	312.5	330.5
85°	39.7	134.6	232.0	290.9	308.9
87.5°	24.0	116.6	212.7	270.4	284.9
90°	10.8	101.0	195.9	251.2	268.0
92.5°	9.6	90.1	182.7	238.0	253.6
95°	8.4	80.5	169.5	223.6	238.0
97.5°	7.2	70.9	156.3	209.1	223.6
100°	6.0	62.5	145.4	195.9	210.3
102.5°	6.0	55.3	134.6	182.7	197.1
105°	4.8	48.1	123.8	171.9	186.3
107.5°	4.8	42.1	114.2	161.1	174.3
110°	4.8	36.1	104.6	150.2	163.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.6	30.0	96.2	139.4	152.7
115°	3.6	24.0	86.5	128.6	141.8
117.5°	3.6	18.0	78.1	119.0	131.0
120°	2.4	13.2	68.5	109.4	121.4
122.5°	2.4	8.4	61.3	98.6	110.6
125°	2.4	3.6	52.9	88.9	101.0
127.5°	2.4	1.2	44.5	79.3	90.1
130°	1.2	1.2	37.3	69.7	79.3
132.5°	1.2	1.2	28.8	60.1	70.9
135°	1.2	1.2	20.4	50.5	60.1
137.5°	1.2	0.0	13.2	40.9	49.3
140°	1.2	0.0	7.2	32.5	39.7
142.5°	1.2	0.0	1.2	22.8	31.3
145°	0.0	0.0	0.0	14.4	20.4
147.5°	0.0	0.0	0.0	6.0	12.0
150°	0.0	0.0	0.0	0.0	3.6
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)