

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: P242165

Luminaire Tested: **S121DR-S1025D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242165
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-S1025D840-X4F0-XX-UDD-D-W
Description: DEFINE 1 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4089.8 lumens
Efficiency: N/A
Efficacy: 99.5 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

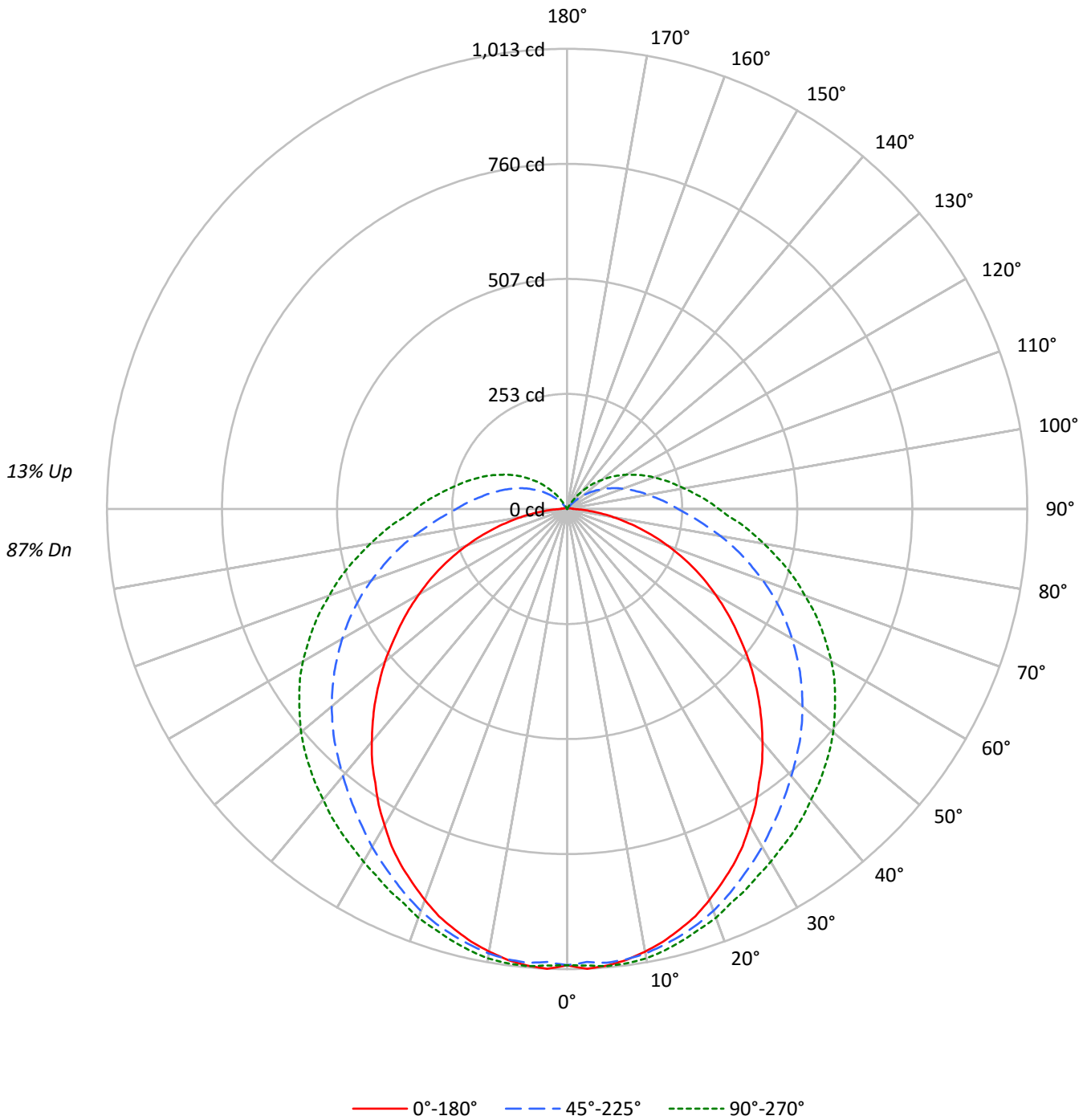
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242165

CATALOG NUMBER: S121DR-S1025D840-X4F0-XX-UDD-D-W

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	29757	29757	29757
5°	29948	28236	27881
10°	29652	26852	26122
15°	29215	25414	24361
20°	28658	24049	22821
25°	28002	22656	21414
30°	27160	21429	20270
35°	26241	20263	19354
40°	25417	19282	18504
45°	24498	18467	17796
50°	23542	17646	17119
55°	22503	16838	16387
60°	21550	16019	15681
65°	20561	15209	14875
70°	19223	14331	14014
75°	17602	13445	13256
80°	15710	12573	12428
85°	13481	11751	11719



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.9	2.3
10°-20°	275.0	6.7
20°-30°	415.8	10.2
30°-40°	508.4	12.4
40°-50°	552.0	13.5
50°-60°	544.6	13.3
60°-70°	488.8	12.0
70°-80°	393.4	9.6
80°-90°	284.1	6.9
90°-100°	203.1	5.0
100°-110°	145.4	3.6
110°-120°	97.0	2.4
120°-130°	55.7	1.4
130°-140°	25.2	0.6
140°-150°	5.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	786.7	19.2
0°-40°	1295.1	31.7
0°-60°	2391.7	58.5
0°-90°	3557.9	87.0
90°-120°	445.4	10.9
90°-150°	531.8	13.0
90°-180°	532.0	13.0
0°-180°	4089.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1004	1004	1004	1004	1004	
5°	1009	1007	1003	1012	1010	96
15°	958	971	971	985	983	270
25°	865	888	901	922	926	398
35°	736	777	813	853	868	462
45°	597	651	724	783	802	461
55°	449	527	626	698	720	402
65°	307	404	516	593	617	303
75°	166	278	400	476	500	176
85°	49	168	289	362	385	52
90°	14	126	244	313	334	9
95°	10	100	211	278	296	8
105°	6	60	154	214	232	7
115°	4	30	108	160	177	4
125°	3	4	66	111	126	3
135°	2	2	25	63	75	1
145°	0	0	0	18	25	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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CATALOG NUMBER: S121DR-S1025D840-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1004.3	1004.3	1004.3	1004.3	1004.3
2.5°	1013.3	1008.8	998.3	1008.8	1005.8
5°	1008.8	1007.3	1002.8	1011.8	1010.3
7.5°	1001.3	1004.3	999.8	1011.8	1008.8
10°	989.3	996.8	993.8	1005.8	1004.3
12.5°	975.8	984.8	983.3	996.8	995.3
15°	957.9	971.4	971.4	984.8	983.3
17.5°	939.9	953.4	957.9	972.9	969.9
20°	916.0	933.9	941.4	954.9	957.9
22.5°	890.5	913.0	922.0	938.4	939.9
25°	865.1	887.5	901.0	922.0	926.5
27.5°	836.7	862.1	880.1	904.0	910.0
30°	803.7	835.2	859.1	886.0	896.5
32.5°	772.3	806.7	835.2	871.1	881.6
35°	736.4	776.8	812.7	853.1	868.1
37.5°	704.9	746.9	790.3	836.7	853.1
40°	669.0	713.9	767.8	818.7	835.2
42.5°	633.1	684.0	745.4	802.2	820.2
45°	597.2	651.1	724.4	782.8	802.2
47.5°	559.8	621.1	700.5	763.3	784.3
50°	523.8	589.7	676.5	742.4	764.8
52.5°	484.9	558.3	651.1	719.9	742.4
55°	449.0	526.8	625.6	697.5	719.9
57.5°	413.1	495.4	598.7	672.0	697.5
60°	377.2	464.0	571.7	646.6	672.0
62.5°	342.7	434.0	544.8	621.1	643.6
65°	306.8	404.1	516.4	592.7	616.6
67.5°	270.9	372.7	487.9	564.3	588.2
70°	235.0	339.7	458.0	535.8	556.8
72.5°	200.6	309.8	428.1	507.4	529.8
75°	166.1	278.4	399.6	475.9	499.9
77.5°	133.2	248.5	371.2	447.5	468.5
80°	103.3	218.5	342.7	419.1	440.0
82.5°	74.8	193.1	314.3	389.1	411.6
85°	49.4	167.6	288.9	362.2	384.7
87.5°	29.9	145.2	264.9	336.8	354.7
90°	13.5	125.7	244.0	312.8	333.8
92.5°	12.0	112.3	227.5	296.3	315.8
95°	10.5	100.3	211.0	278.4	296.3
97.5°	9.0	88.3	194.6	260.4	278.4
100°	7.5	77.8	181.1	244.0	261.9
102.5°	7.5	68.8	167.6	227.5	245.5
105°	6.0	59.9	154.2	214.0	232.0
107.5°	6.0	52.4	142.2	200.6	217.0
110°	6.0	44.9	130.2	187.1	203.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.5	37.4	119.7	173.6	190.1
115°	4.5	29.9	107.8	160.1	176.6
117.5°	4.5	22.5	97.3	148.2	163.1
120°	3.0	16.5	85.3	136.2	151.2
122.5°	3.0	10.5	76.3	122.7	137.7
125°	3.0	4.5	65.9	110.8	125.7
127.5°	3.0	1.5	55.4	98.8	112.3
130°	1.5	1.5	46.4	86.8	98.8
132.5°	1.5	1.5	35.9	74.8	88.3
135°	1.5	1.5	25.4	62.9	74.8
137.5°	1.5	0.0	16.5	50.9	61.4
140°	1.5	0.0	9.0	40.4	49.4
142.5°	1.5	0.0	1.5	28.4	38.9
145°	0.0	0.0	0.0	18.0	25.4
147.5°	0.0	0.0	0.0	7.5	15.0
150°	0.0	0.0	0.0	0.0	4.5
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)