

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: P242163

Luminaire Tested: **S121DR-S685D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242163
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-S685D840-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: 2759.4 lumens
Efficiency: N/A
Efficacy: 104.9 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

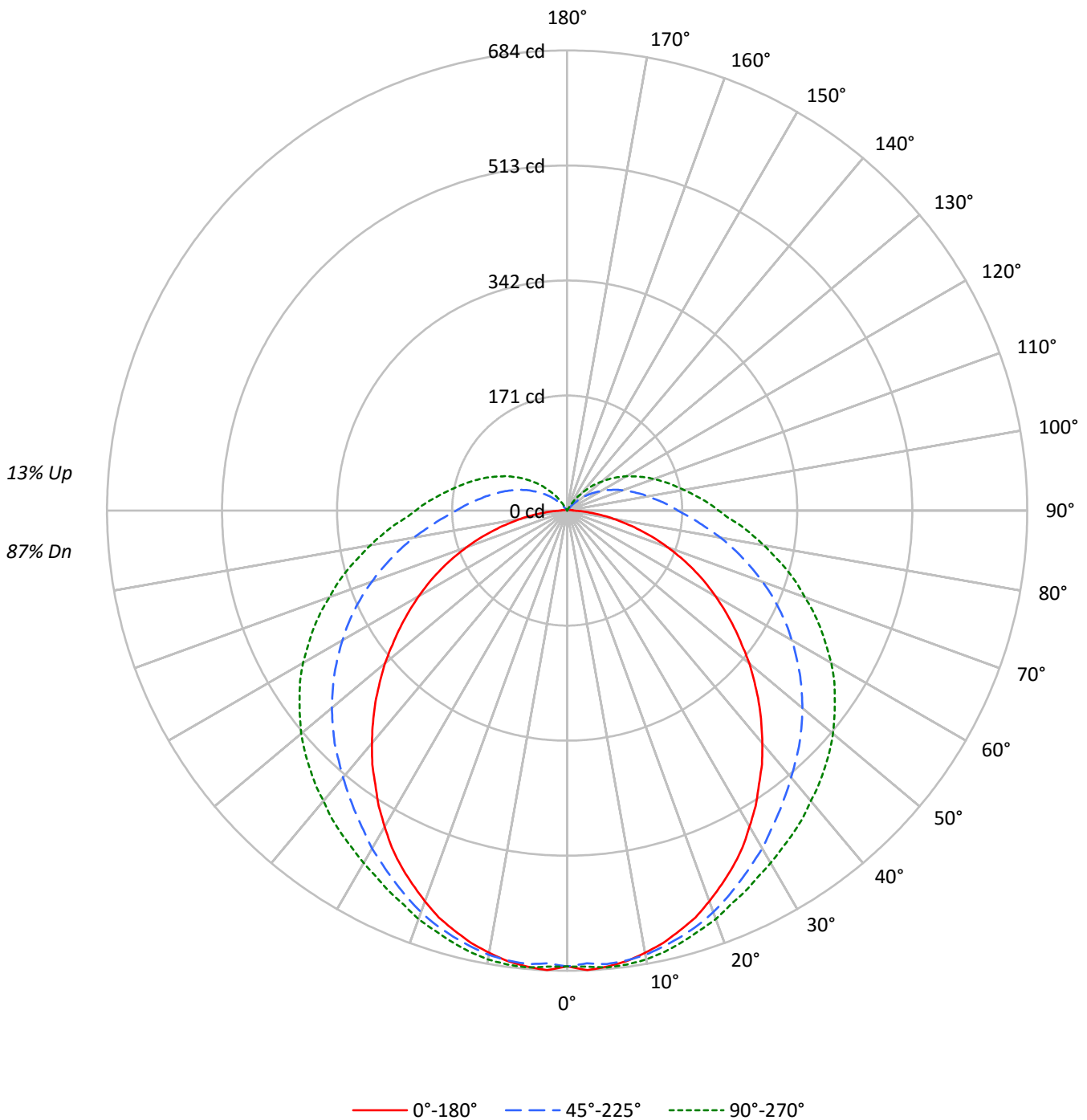
Input Watts (W): 26.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	20077	20077	20077
5°	20205	19051	18813
10°	20007	18117	17625
15°	19712	17147	16438
20°	19335	16227	15397
25°	18893	15286	14448
30°	18326	14460	13677
35°	17707	13673	13058
40°	17150	13011	12484
45°	16527	12461	12008
50°	15888	11908	11550
55°	15186	11361	11056
60°	14540	10810	10580
65°	13873	10261	10038
70°	12965	9669	9456
75°	11880	9071	8944
80°	10600	8486	8386
85°	9087	7928	7905



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.7	2.3
10°-20°	185.6	6.7
20°-30°	280.6	10.2
30°-40°	343.1	12.4
40°-50°	372.4	13.5
50°-60°	367.4	13.3
60°-70°	329.8	12.0
70°-80°	265.4	9.6
80°-90°	191.7	6.9
90°-100°	137.0	5.0
100°-110°	98.1	3.6
110°-120°	65.4	2.4
120°-130°	37.6	1.4
130°-140°	17.0	0.6
140°-150°	3.7	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	530.8	19.2
0°-40°	873.9	31.7
0°-60°	1613.7	58.5
0°-90°	2400.6	87.0
90°-120°	300.5	10.9
90°-150°	358.8	13.0
90°-180°	359.0	13.0
0°-180°	2759.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	678	678	678	678	678	
5°	681	680	677	683	682	65
15°	646	655	655	664	664	182
25°	584	599	608	622	625	269
35°	497	524	548	576	586	311
45°	403	439	489	528	541	311
55°	303	356	422	471	486	271
65°	207	273	348	400	416	205
75°	112	188	270	321	337	119
85°	33	113	195	244	260	35
90°	9	85	165	211	225	6
95°	7	68	142	188	200	5
105°	4	40	104	144	156	5
115°	3	20	73	108	119	3
125°	2	3	44	75	85	2
135°	1	1	17	42	50	1
145°	0	0	0	12	17	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°	677.6	677.6	677.6	677.6	677.6
2.5°	683.7	680.6	673.6	680.6	678.6
5°	680.6	679.6	676.6	682.7	681.7
7.5°	675.6	677.6	674.6	682.7	680.6
10°	667.5	672.6	670.5	678.6	677.6
12.5°	658.4	664.5	663.5	672.6	671.6
15°	646.3	655.4	655.4	664.5	663.5
17.5°	634.2	643.3	646.3	656.4	654.4
20°	618.0	630.2	635.2	644.3	646.3
22.5°	600.9	616.0	622.1	633.2	634.2
25°	583.7	598.8	607.9	622.1	625.1
27.5°	564.5	581.7	593.8	610.0	614.0
30°	542.3	563.5	579.7	597.8	604.9
32.5°	521.1	544.3	563.5	587.7	594.8
35°	496.9	524.1	548.4	575.6	585.7
37.5°	475.6	503.9	533.2	564.5	575.6
40°	451.4	481.7	518.1	552.4	563.5
42.5°	427.2	461.5	502.9	541.3	553.4
45°	402.9	439.3	488.8	528.2	541.3
47.5°	377.7	419.1	472.6	515.0	529.2
50°	353.5	397.9	456.5	500.9	516.0
52.5°	327.2	376.7	439.3	485.7	500.9
55°	303.0	355.5	422.1	470.6	485.7
57.5°	278.7	334.3	403.9	453.4	470.6
60°	254.5	313.1	385.8	436.3	453.4
62.5°	231.3	292.9	367.6	419.1	434.2
65°	207.0	272.7	348.4	399.9	416.1
67.5°	182.8	251.5	329.2	380.7	396.9
70°	158.5	229.2	309.0	361.5	375.7
72.5°	135.3	209.0	288.8	342.3	357.5
75°	112.1	187.8	269.6	321.1	337.3
77.5°	89.9	167.6	250.4	301.9	316.1
80°	69.7	147.4	231.3	282.8	296.9
82.5°	50.5	130.3	212.1	262.6	277.7
85°	33.3	113.1	194.9	244.4	259.5
87.5°	20.2	98.0	178.7	227.2	239.3
90°	9.1	84.8	164.6	211.1	225.2
92.5°	8.1	75.7	153.5	200.0	213.1
95°	7.1	67.7	142.4	187.8	200.0
97.5°	6.1	59.6	131.3	175.7	187.8
100°	5.0	52.5	122.2	164.6	176.7
102.5°	5.0	46.5	113.1	153.5	165.6
105°	4.0	40.4	104.0	144.4	156.5
107.5°	4.0	35.3	95.9	135.3	146.4
110°	4.0	30.3	87.9	126.2	137.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.0	25.2	80.8	117.1	128.3
115°	3.0	20.2	72.7	108.1	119.2
117.5°	3.0	15.1	65.6	100.0	110.1
120°	2.0	11.1	57.6	91.9	102.0
122.5°	2.0	7.1	51.5	82.8	92.9
125°	2.0	3.0	44.4	74.7	84.8
127.5°	2.0	1.0	37.4	66.7	75.7
130°	1.0	1.0	31.3	58.6	66.7
132.5°	1.0	1.0	24.2	50.5	59.6
135°	1.0	1.0	17.2	42.4	50.5
137.5°	1.0	0.0	11.1	34.3	41.4
140°	1.0	0.0	6.1	27.3	33.3
142.5°	1.0	0.0	1.0	19.2	26.3
145°	0.0	0.0	0.0	12.1	17.2
147.5°	0.0	0.0	0.0	5.0	10.1
150°	0.0	0.0	0.0	0.0	3.0
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)