

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: P333981

Luminaire Tested: **S123DS-S560D940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333981
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DS-S560D940-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 560 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1975.4 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

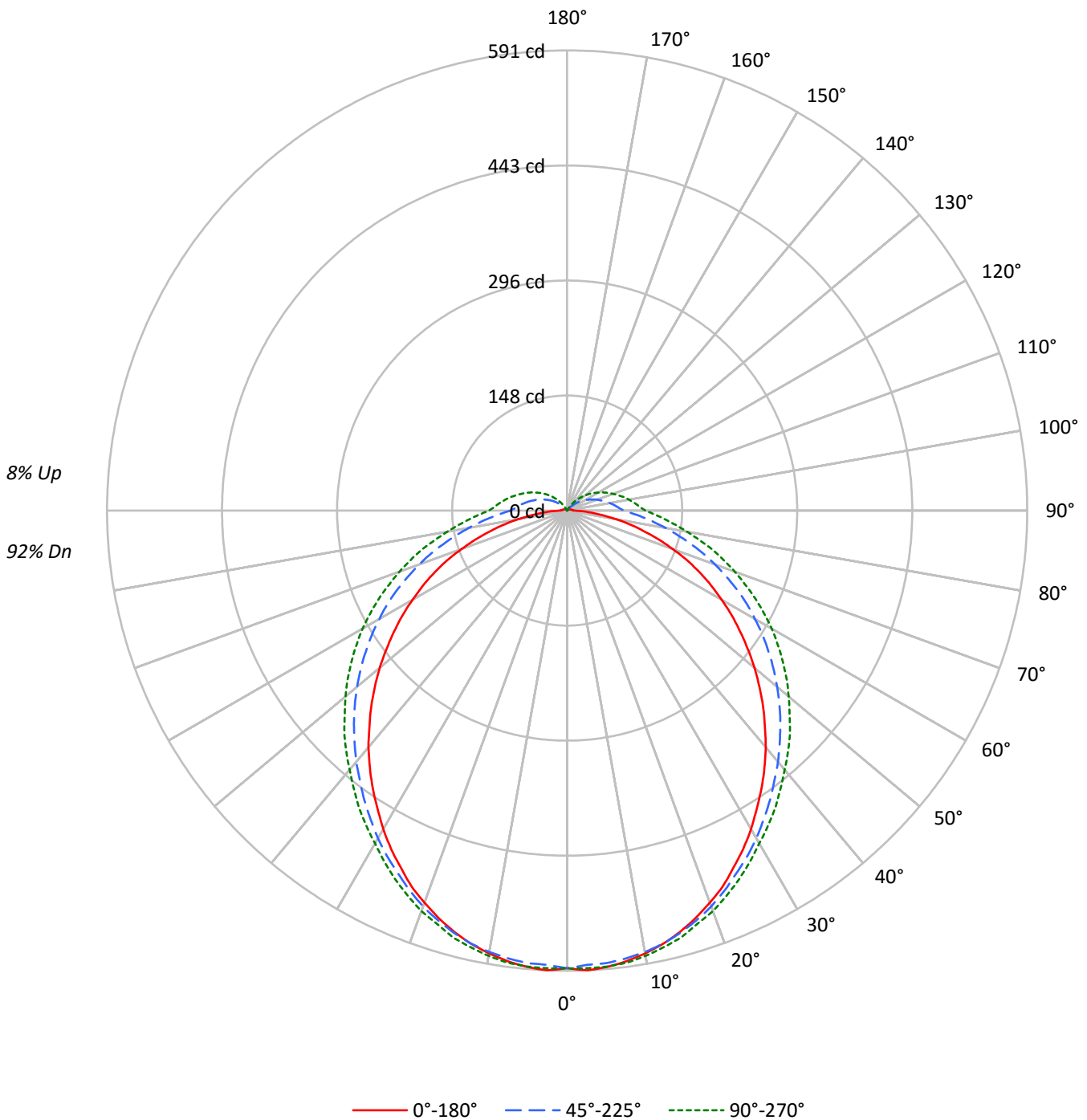
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	92
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76	73
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63	60
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52	50
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45	42
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39	36
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34	32
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6327	6327	6327
5°	6358	6303	6351
10°	6312	6291	6347
15°	6243	6257	6322
20°	6139	6197	6270
25°	6007	6106	6206
30°	5873	6041	6135
35°	5721	5966	6125
40°	5578	5920	6108
45°	5419	5897	6161
50°	5265	5896	6219
55°	5095	5925	6345
60°	4934	5996	6534
65°	4778	6131	6785
70°	4535	6367	7213
75°	4234	6816	8014
80°	3930	7941	9682
85°	3878	12017	15500



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.8	2.8
10°-20°	158.9	8.0
20°-30°	237.7	12.0
30°-40°	283.8	14.4
40°-50°	296.9	15.0
50°-60°	278.7	14.1
60°-70°	232.7	11.8
70°-80°	166.4	8.4
80°-90°	99.0	5.0
90°-100°	62.2	3.2
100°-110°	45.7	2.3
110°-120°	30.5	1.5
120°-130°	17.4	0.9
130°-140°	7.8	0.4
140°-150°	1.6	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	452.4	22.9
0°-40°	736.2	37.3
0°-60°	1311.8	66.4
0°-90°	1810.0	91.6
90°-120°	138.5	7.0
90°-150°	165.4	8.4
90°-180°	165.0	8.4
0°-180°	1975.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	588	588	588	588	588	
5°	588	587	583	588	588	56
15°	560	562	562	568	567	158
25°	506	512	514	522	522	233
35°	435	446	454	464	466	272
45°	356	371	387	400	405	275
55°	272	293	316	333	338	243
65°	188	213	241	260	266	185
75°	102	132	164	185	193	109
85°	31	63	97	119	126	32
90°	8	40	72	94	100	6
95°	7	32	63	83	90	5
105°	5	20	48	66	72	5
115°	3	11	34	49	54	3
125°	2	2	20	34	38	2
135°	1	1	8	19	22	1
145°	1	0	0	5	8	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: P333981

CATALOG NUMBER: S123DS-S560D940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	587.8	587.8	587.8	587.8	587.8
2.5°	591.0	589.1	583.9	589.1	588.4
5°	588.4	587.1	583.3	588.4	587.8
7.5°	583.9	583.9	580.1	586.5	585.8
10°	577.5	578.8	575.6	582.0	580.7
12.5°	569.8	571.8	569.8	575.6	574.3
15°	560.2	562.2	561.5	567.9	567.3
17.5°	548.7	552.6	551.9	557.7	556.4
20°	535.9	539.7	541.0	546.8	547.4
22.5°	522.5	526.3	528.2	535.9	535.3
25°	505.8	512.2	514.1	522.5	522.5
27.5°	489.8	496.9	500.7	507.7	508.4
30°	472.5	480.8	486.0	493.6	493.6
32.5°	453.3	462.9	470.0	478.3	480.2
35°	435.4	445.6	454.0	463.6	466.1
37.5°	416.2	427.7	437.3	448.2	450.1
40°	397.0	408.5	421.3	432.2	434.7
42.5°	375.8	390.6	404.0	416.2	420.0
45°	356.0	371.4	387.4	399.5	404.7
47.5°	334.9	352.1	370.1	383.5	387.4
50°	314.4	332.3	352.1	366.9	371.4
52.5°	292.6	311.8	334.2	349.6	355.4
55°	271.5	292.6	315.7	332.9	338.1
57.5°	251.0	272.8	297.7	315.0	320.8
60°	229.2	252.3	278.5	296.4	303.5
62.5°	208.7	232.4	260.6	278.5	284.9
65°	187.6	212.6	240.7	260.0	266.4
67.5°	166.5	192.7	220.9	242.0	247.1
70°	144.1	171.6	202.3	222.8	229.2
72.5°	123.6	151.1	183.1	204.2	210.6
75°	101.8	131.9	163.9	185.0	192.7
77.5°	83.2	113.3	145.3	167.8	173.5
80°	63.4	94.8	128.1	149.8	156.2
82.5°	46.1	78.1	112.0	133.8	140.2
85°	31.4	63.4	97.3	119.1	125.5
87.5°	19.2	51.2	83.9	105.6	112.0
90°	8.3	39.7	72.4	94.1	100.5
92.5°	7.7	35.2	67.2	88.4	94.1
95°	7.0	32.0	63.4	83.2	89.6
97.5°	6.4	29.5	59.5	78.8	85.2
100°	5.8	26.3	55.7	74.3	80.7
102.5°	5.1	23.0	51.9	69.8	76.2
105°	5.1	20.5	48.0	65.9	71.7
107.5°	4.5	17.9	44.2	61.5	67.2
110°	3.8	15.4	41.0	57.6	62.7



TEST NUMBER: P333981

CATALOG NUMBER: S123DS-S560D940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.8	12.8	37.1	53.1	58.9
115°	3.2	10.9	33.9	49.3	54.4
117.5°	3.2	8.3	30.1	45.5	50.6
120°	2.6	5.8	26.9	41.6	46.1
122.5°	2.6	3.8	23.7	37.8	42.3
125°	1.9	1.9	20.5	33.9	38.4
127.5°	1.9	1.3	17.3	30.1	34.6
130°	1.9	1.3	14.1	26.3	30.1
132.5°	1.3	1.3	10.9	22.4	26.9
135°	1.3	0.6	7.7	19.2	22.4
137.5°	1.3	0.6	5.1	15.4	18.6
140°	0.6	0.6	2.6	12.2	15.4
142.5°	0.6	0.0	0.0	8.3	11.5
145°	0.6	0.0	0.0	5.1	7.7
147.5°	0.0	0.0	0.0	1.9	4.5
150°	0.0	0.0	0.0	0.0	1.3
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)