

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: P242081

Luminaire Tested: **S121DR-S880D927-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242081  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121DR-S880D927-X4F0-XX-UDD-F-W  
Description: DEFINE 1 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2778.4 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')  
CIE Type: Direct

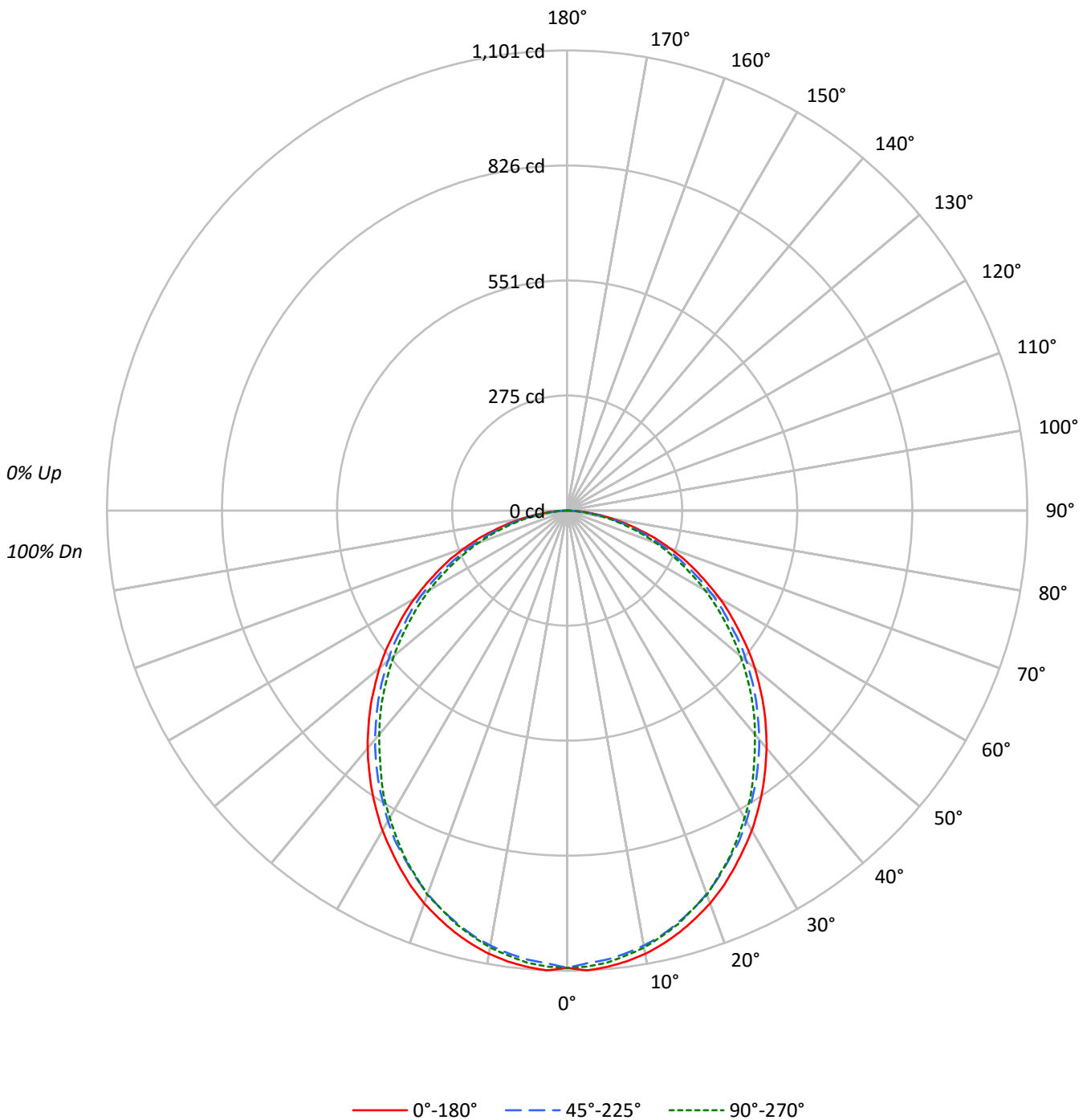
Input Watts (W): 34.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76		83	78	75		80	76	73	71
3	91	80	72	66	88	79	71	66	76	70	64		73	68	63		71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55		65	59	54		63	58	54	52
5	77	64	55	49	75	63	55	48	61	54	48		59	52	47		57	51	47	45
6	71	58	49	43	69	57	49	42	55	48	42		53	47	42		52	46	41	39
7	66	53	44	38	64	52	44	38	50	43	37		49	42	37		47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	34		45	38	33		44	38	33	31
9	57	44	36	31	56	44	36	30	42	35	30		41	35	30		40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28		38	32	27		37	32	27	26

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

	0°	45°	90°
0°	32418	32418	32418
5°	32601	32090	32301
10°	32400	31793	31943
15°	32012	31328	31423
20°	31534	30771	30834
25°	30882	30054	29989
30°	30241	29345	29034
35°	29490	28503	28065
40°	28719	27663	27040
45°	27895	26755	26076
50°	27007	25800	24961
55°	25937	24630	23747
60°	25025	23710	22631
65°	23795	22239	21103
70°	22403	20740	19605
75°	20584	18855	17584
80°	18275	16551	15340
85°	15128	12375	10981



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.0	3.7
10°-20°	290.1	10.4
20°-30°	426.7	15.4
30°-40°	495.4	17.8
40°-50°	494.3	17.8
50°-60°	430.1	15.5
60°-70°	316.8	11.4
70°-80°	176.5	6.4
80°-90°	45.5	1.6
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°	819.8	29.5
0°-40°	1315.2	47.3
0°-60°	2239.7	80.6
0°-90°	2778.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2778.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1094	1094	1094	1094	1094	
5°	1096	1091	1079	1088	1086	104
15°	1044	1036	1021	1028	1024	294
25°	945	934	919	921	917	435
35°	815	805	788	780	776	510
45°	666	655	638	626	622	513
55°	502	496	477	468	460	450
65°	339	332	317	307	301	337
75°	180	175	165	158	154	192
85°	44	42	36	34	32	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1094.1	1094.1	1094.1	1094.1	1094.1
2.5°	1101.1	1095.1	1084.0	1093.1	1092.1
5°	1096.1	1091.0	1078.9	1088.0	1086.0
7.5°	1088.0	1082.0	1068.8	1076.9	1073.9
10°	1076.9	1070.8	1056.7	1062.8	1061.7
12.5°	1061.7	1054.7	1041.5	1046.6	1043.6
15°	1043.6	1035.5	1021.3	1028.4	1024.4
17.5°	1022.4	1013.3	1000.1	1004.2	1000.1
20°	1000.1	990.0	975.9	979.9	977.9
22.5°	973.9	964.8	948.6	950.6	946.6
25°	944.6	934.5	919.3	921.3	917.3
27.5°	914.3	905.2	891.0	888.0	882.9
30°	883.9	872.8	857.7	853.6	848.6
32.5°	849.6	839.5	822.3	818.3	815.3
35°	815.3	805.2	788.0	779.9	775.9
37.5°	778.9	768.8	751.6	742.5	736.5
40°	742.5	731.4	715.2	706.1	699.1
42.5°	704.1	694.0	675.8	666.8	661.7
45°	665.7	654.6	638.5	626.3	622.3
47.5°	625.3	615.2	599.1	585.9	581.9
50°	585.9	574.8	559.7	546.5	541.5
52.5°	545.5	535.4	521.3	508.1	500.1
55°	502.1	496.0	476.8	467.7	459.7
57.5°	462.7	455.6	440.5	425.3	420.3
60°	422.3	414.2	400.1	386.9	381.9
62.5°	379.8	373.8	359.6	347.5	340.4
65°	339.4	332.4	317.2	307.1	301.0
67.5°	302.1	293.0	277.8	267.7	262.7
70°	258.6	251.5	239.4	231.3	226.3
72.5°	221.2	213.2	202.0	194.0	188.9
75°	179.8	174.8	164.7	157.6	153.6
77.5°	143.5	136.4	129.3	124.3	121.2
80°	107.1	102.0	97.0	91.9	89.9
82.5°	74.8	70.7	65.7	62.6	59.6
85°	44.5	42.4	36.4	34.3	32.3
87.5°	21.2	18.2	12.1	11.1	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)