

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: P242541

Luminaire Tested: **S123RDR-S775D840-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242541  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDR-S775D840-X4F0-XX-UDD-F-W  
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2813.0 lumens  
Efficiency: N/A  
Efficacy: 106.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')  
CIE Type: Direct

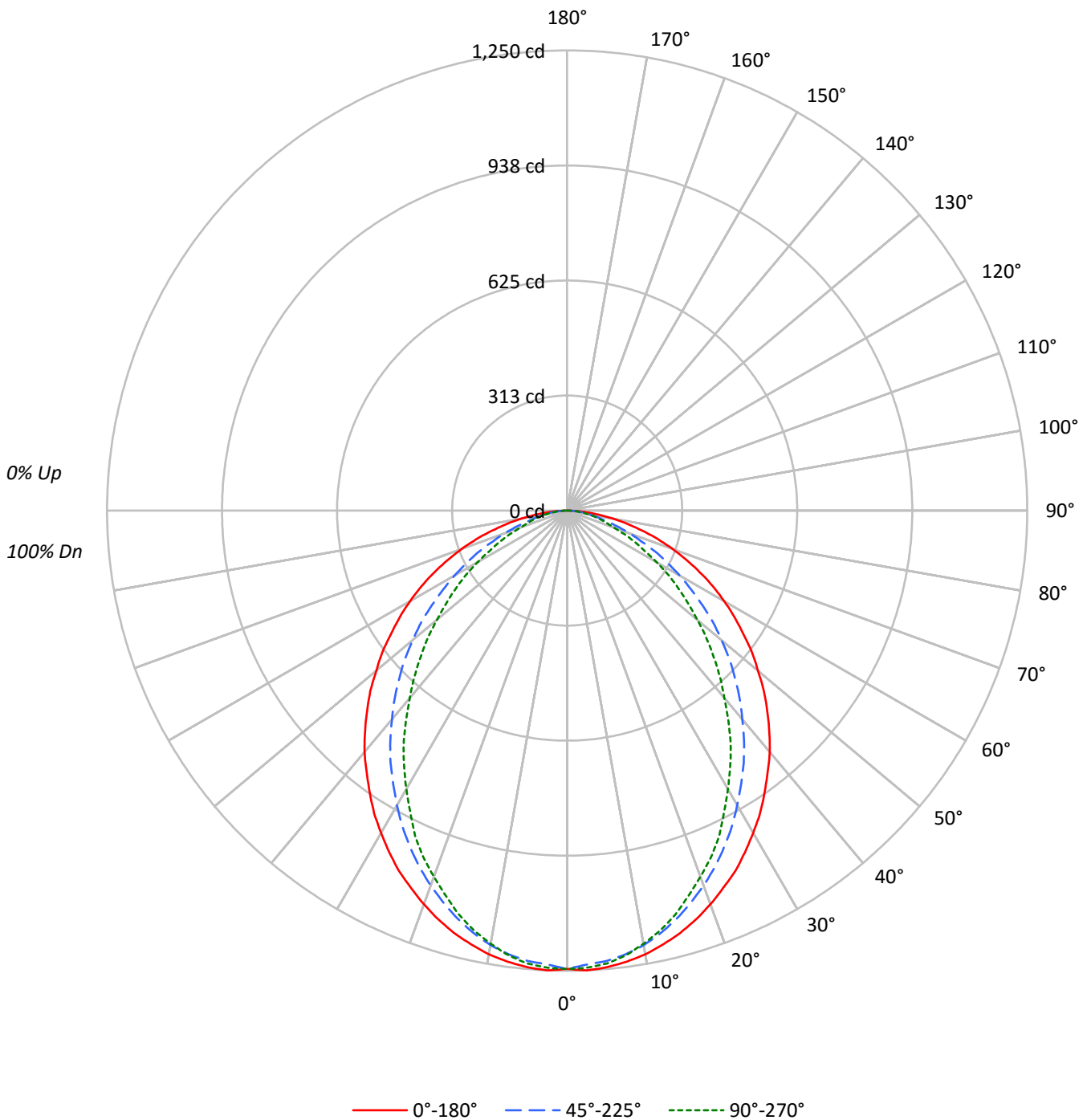
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88					86				
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75					73				
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64					62				
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56					54				
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49					47				
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44					42				
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39					37				
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35					34				
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32					30				
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29					28				

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

	0°	45°	90°
0°	15093	15093	15093
5°	15151	14942	15028
10°	15065	14754	14705
15°	14903	14409	14257
20°	14681	13978	13651
25°	14452	13493	13060
30°	14149	12933	12226
35°	13837	12373	11462
40°	13551	11712	10514
45°	13174	11062	9660
50°	12759	10321	8703
55°	12335	9476	7811
60°	11947	8570	6832
65°	11441	7589	5851
70°	10809	6372	4724
75°	9886	5011	4444
80°	8809	4439	4090
85°	7441	3936	3658



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.1	4.2
10°-20°	325.6	11.6
20°-30°	468.8	16.7
30°-40°	528.0	18.8
40°-50°	505.0	18.0
50°-60°	413.4	14.7
60°-70°	278.7	9.9
70°-80°	139.8	5.0
80°-90°	36.5	1.3
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°	911.5	32.4
0°-40°	1439.5	51.2
0°-60°	2358.0	83.8
0°-90°	2813.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2813.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1245	1245	1245	1245	1245	
5°	1245	1240	1228	1237	1235	118
15°	1188	1176	1148	1143	1136	335
25°	1081	1055	1009	988	976	497
35°	935	899	836	793	775	585
45°	768	723	645	588	564	593
55°	584	534	448	390	370	523
65°	399	343	265	215	204	395
75°	211	163	107	97	95	225
85°	54	31	28	26	26	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1245.2	1245.2	1245.2	1245.2	1245.2
2.5°	1250.2	1246.2	1234.1	1245.2	1243.1
5°	1245.2	1240.1	1228.0	1237.1	1235.1
7.5°	1236.1	1231.0	1215.9	1221.9	1218.9
10°	1224.0	1216.9	1198.7	1199.7	1194.7
12.5°	1206.8	1198.7	1175.5	1174.5	1168.4
15°	1187.6	1176.5	1148.2	1143.2	1136.1
17.5°	1164.4	1152.3	1116.9	1106.8	1096.7
20°	1138.1	1122.0	1083.6	1070.5	1058.3
22.5°	1108.8	1089.6	1048.2	1031.1	1020.0
25°	1080.6	1055.3	1008.9	987.6	976.5
27.5°	1046.2	1019.0	968.5	940.2	923.0
30°	1010.9	980.6	924.0	889.7	873.5
32.5°	975.5	940.2	879.6	841.2	824.1
35°	935.1	898.8	836.2	792.7	774.6
37.5°	894.7	855.4	789.7	741.2	719.0
40°	856.4	811.9	740.2	687.7	664.5
42.5°	812.9	768.5	693.8	635.2	615.0
45°	768.5	723.1	645.3	587.7	563.5
47.5°	725.1	674.6	597.8	535.2	514.0
50°	676.6	629.1	547.3	484.7	461.5
52.5°	633.2	580.7	499.9	434.2	414.0
55°	583.7	534.2	448.4	389.8	369.6
57.5°	539.3	485.7	398.9	343.4	326.2
60°	492.8	437.3	353.5	298.9	281.8
62.5°	446.4	390.8	307.0	256.5	238.3
65°	398.9	343.4	264.6	215.1	204.0
67.5°	351.4	294.9	218.1	180.8	168.6
70°	305.0	250.4	179.8	144.4	133.3
72.5°	258.5	205.0	142.4	115.1	112.1
75°	211.1	162.6	107.0	96.9	94.9
77.5°	167.6	123.2	83.8	77.8	75.7
80°	126.2	84.8	63.6	60.6	58.6
82.5°	86.8	52.5	45.4	42.4	42.4
85°	53.5	31.3	28.3	26.3	26.3
87.5°	24.2	13.1	13.1	12.1	11.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)