

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: P243392

Luminaire Tested: **S123RDR-H775D830-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243392
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-64)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDR-H775D830-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2587.0 lumens
Efficiency: N/A
Efficacy: 109.6 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

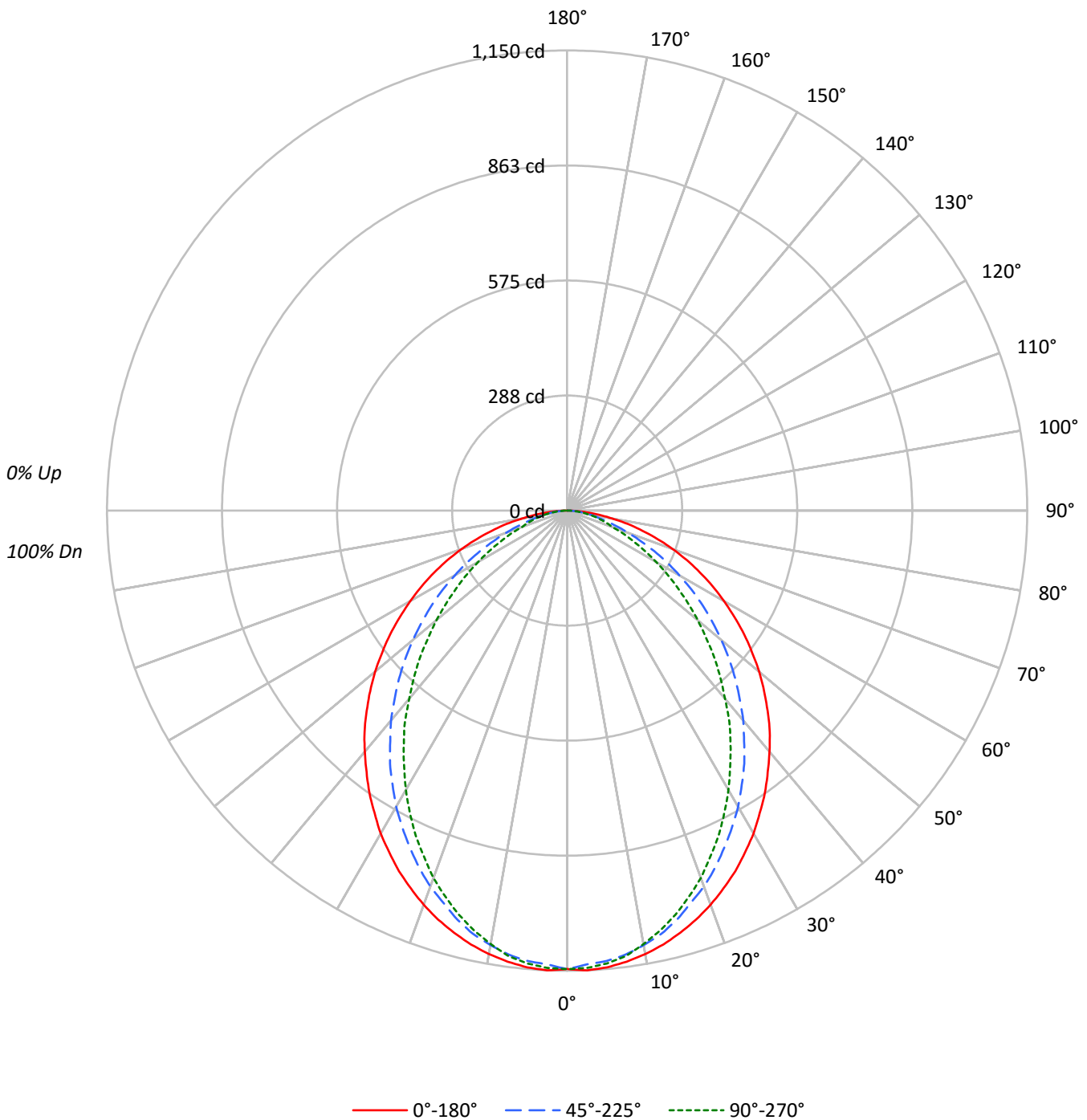
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P243392

CATALOG NUMBER: S123RDR-H775D830-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P243392

CATALOG NUMBER: S123RDR-H775D830-X4F0-XX-UDD-F-W

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					86			
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73					73			
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	62					62			
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	67	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	29	28					28			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13888	13888	13888
5°	13942	13749	13824
10°	13854	13572	13539
15°	13705	13285	13120
20°	13520	12895	12600
25°	13299	12429	11982
30°	13045	11960	11282
35°	12749	11421	10534
40°	12448	10834	9706
45°	12143	10182	8931
50°	11816	9476	8031
55°	11418	8740	7124
60°	10965	7872	6208
65°	10526	6889	5300
70°	9920	5770	4242
75°	9151	4576	4037
80°	7986	4056	3686
85°	6731	3546	3421



TEST NUMBER: P243392

CATALOG NUMBER: S123RDR-H775D830-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.8	4.2
10°-20°	300.1	11.6
20°-30°	432.0	16.7
30°-40°	486.6	18.8
40°-50°	464.9	18.0
50°-60°	380.1	14.7
60°-70°	255.3	9.9
70°-80°	127.3	4.9
80°-90°	32.9	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°	839.9	32.5
0°-40°	1326.5	51.3
0°-60°	2171.5	83.9
0°-90°	2587.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2587.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1146	1146	1146	1146	1146	
5°	1146	1141	1130	1139	1136	109
15°	1092	1084	1059	1052	1046	308
25°	994	972	929	909	896	458
35°	862	828	772	729	712	539
45°	708	666	594	542	521	547
55°	540	492	414	356	337	483
65°	367	316	240	196	185	363
75°	195	149	98	88	86	207
85°	48	28	26	24	25	56
90°	0	0	0	0	0	



TEST NUMBER: P243392

CATALOG NUMBER: S123RDR-H775D830-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1145.8	1145.8	1145.8	1145.8	1145.8	1145.8	1145.8	1145.8	1145.8	1145.8	1145.8
2.5°	1150.2	1147.6	1144.0	1144.9	1145.8	1146.7	1146.7	1145.8	1143.2	1139.6	1135.2
5°	1145.8	1143.2	1139.6	1139.6	1141.4	1141.4	1141.4	1140.5	1137.9	1134.4	1130.0
7.5°	1137.0	1135.2	1130.8	1131.7	1132.6	1132.6	1132.6	1131.7	1128.2	1123.8	1119.4
10°	1125.6	1122.9	1119.4	1119.4	1120.3	1120.3	1120.3	1118.5	1114.1	1108.8	1102.7
12.5°	1110.6	1108.0	1104.4	1104.4	1104.4	1104.4	1104.4	1101.8	1094.8	1089.5	1084.2
15°	1092.1	1089.5	1086.0	1086.0	1085.1	1084.2	1082.4	1078.0	1071.9	1065.7	1058.7
17.5°	1071.9	1068.4	1064.0	1063.1	1062.2	1061.3	1058.7	1056.0	1047.2	1038.4	1027.9
20°	1048.1	1044.6	1040.2	1039.3	1036.7	1034.0	1032.3	1027.0	1017.3	1006.8	999.7
22.5°	1021.7	1018.2	1013.8	1012.0	1006.8	1005.0	1002.4	994.4	983.9	974.2	966.3
25°	994.4	990.0	984.8	982.1	976.0	972.4	971.6	960.1	949.6	939.0	929.3
27.5°	962.8	959.2	954.8	949.6	943.4	939.0	937.2	926.7	913.5	901.2	892.4
30°	932.0	926.7	922.3	916.1	907.3	902.9	899.4	888.8	877.4	862.4	854.5
32.5°	895.9	892.4	887.1	880.9	872.1	868.6	863.3	850.1	835.2	824.6	812.3
35°	861.6	858.0	850.1	844.0	831.6	828.1	822.8	811.4	794.7	782.3	771.8
37.5°	823.7	819.3	813.1	804.3	793.8	789.4	782.3	770.9	751.5	739.2	726.0
40°	786.7	780.6	773.5	763.9	753.3	748.9	742.7	726.0	710.2	696.1	684.7
42.5°	749.8	742.7	733.9	725.1	713.7	707.5	700.5	684.7	667.1	653.9	638.0
45°	708.4	703.1	694.3	683.8	670.6	666.2	658.3	641.5	623.9	609.9	594.0
47.5°	667.9	661.8	653.0	642.4	629.2	623.1	615.1	598.4	580.8	563.2	549.1
50°	626.6	620.4	609.9	599.3	587.0	579.1	572.0	555.3	535.9	520.1	502.5
52.5°	582.6	577.3	568.5	557.9	542.1	535.9	528.9	510.4	491.9	473.5	457.6
55°	540.3	536.8	526.3	515.7	499.0	491.9	484.9	465.5	447.1	428.6	413.6
57.5°	496.3	493.7	483.1	470.8	455.9	448.8	440.0	420.7	403.1	384.6	368.7
60°	452.3	449.7	439.1	426.8	412.7	403.9	394.3	379.3	359.1	342.3	324.7
62.5°	410.1	406.6	397.8	384.6	368.7	359.9	351.1	333.5	315.1	297.5	281.6
65°	367.0	362.6	352.0	338.8	323.9	315.9	307.1	290.4	271.9	255.2	240.2
67.5°	323.9	319.5	308.0	297.5	279.9	271.9	264.0	247.3	229.7	213.0	198.9
70°	279.9	275.5	266.6	252.6	237.6	229.7	221.8	204.2	188.3	176.0	162.8
72.5°	236.7	233.2	224.4	211.2	197.1	189.2	180.4	165.4	151.4	138.2	128.5
75°	195.4	190.1	182.2	169.8	155.8	148.7	142.6	127.6	114.4	105.6	97.7
77.5°	155.8	149.6	140.8	131.1	117.9	110.9	104.7	92.4	83.6	77.4	75.7
80°	114.4	113.5	104.7	94.2	82.7	77.4	71.3	63.4	60.7	59.8	58.1
82.5°	80.1	76.6	69.5	59.8	51.0	47.5	45.8	44.0	42.2	42.2	40.5
85°	48.4	44.9	38.7	30.8	29.0	28.2	27.3	27.3	26.4	25.5	25.5
87.5°	21.1	17.6	13.2	12.3	11.4	11.4	12.3	12.3	12.3	11.4	11.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P243392

CATALOG NUMBER: S123RDR-H775D830-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1145.8	1145.8	1145.8	1145.8	1145.8	1145.8	1145.8	1145.8	1145.8	1145.8
2.5°	1137.0	1141.4	1144.0	1144.9	1144.9	1144.9	1145.8	1145.8	1144.9	1144.0
5°	1130.8	1135.2	1137.0	1138.8	1138.8	1138.8	1138.8	1138.8	1137.9	1136.1
7.5°	1121.2	1123.8	1126.4	1125.6	1125.6	1124.7	1123.8	1124.7	1122.9	1122.9
10°	1103.6	1106.2	1108.0	1105.3	1105.3	1106.2	1106.2	1105.3	1102.7	1100.0
12.5°	1083.3	1086.0	1083.3	1084.2	1082.4	1080.7	1079.8	1078.9	1076.3	1074.5
15°	1056.9	1056.9	1055.2	1055.2	1052.5	1049.0	1048.1	1049.0	1045.5	1045.5
17.5°	1027.9	1026.1	1023.5	1021.7	1020.8	1020.8	1017.3	1017.3	1012.9	1012.0
20°	996.2	994.4	991.8	987.4	985.6	986.5	983.0	980.4	977.7	976.8
22.5°	962.8	958.4	955.7	951.3	947.8	947.8	945.2	940.8	938.1	935.5
25°	924.9	920.5	915.2	911.7	909.1	904.7	902.9	899.4	896.8	895.9
27.5°	886.2	879.2	872.1	868.6	866.8	861.6	858.9	857.2	851.9	851.0
30°	844.8	839.6	830.8	824.6	820.2	821.1	814.9	811.4	808.7	806.1
32.5°	805.2	796.4	787.6	779.7	774.4	773.5	767.4	763.9	761.2	758.6
35°	760.3	751.5	741.0	733.9	728.7	726.0	719.9	718.1	713.7	711.9
37.5°	715.5	705.8	695.2	686.4	682.9	676.7	674.1	669.7	666.2	666.2
40°	671.5	660.0	649.5	638.9	634.5	631.0	623.9	620.4	616.0	613.4
42.5°	625.7	612.5	602.8	593.1	587.0	584.3	576.4	572.0	567.6	566.7
45°	579.9	566.7	554.4	544.7	542.1	536.8	528.9	522.7	521.9	521.0
47.5°	533.3	520.1	508.7	498.1	494.6	488.4	483.1	478.7	473.5	470.8
50°	488.4	475.2	462.9	451.5	447.1	441.8	436.5	430.3	428.6	425.9
52.5°	443.5	428.6	415.4	404.8	401.3	396.9	390.7	385.5	382.8	381.1
55°	397.8	382.8	371.4	360.8	356.4	353.8	346.7	342.3	338.8	337.1
57.5°	352.9	337.9	327.4	319.5	313.3	310.7	303.6	299.2	297.5	296.6
60°	310.7	296.6	285.1	277.2	271.9	269.3	264.0	259.6	257.0	256.1
62.5°	268.4	256.1	245.5	237.6	234.1	230.6	226.2	222.6	220.0	220.0
65°	227.9	215.6	205.9	199.8	196.2	194.5	189.2	187.4	184.8	184.8
67.5°	188.3	179.5	172.5	164.6	161.9	161.9	156.6	154.9	153.1	153.1
70°	154.0	146.1	138.2	133.8	131.1	130.2	125.8	123.2	121.4	119.7
72.5°	120.6	113.5	106.5	105.6	105.6	104.7	104.7	103.0	103.0	103.8
75°	92.4	90.6	88.9	88.9	88.0	87.1	87.1	86.2	86.2	86.2
77.5°	73.9	73.0	72.2	71.3	71.3	70.4	69.5	69.5	69.5	69.5
80°	56.3	55.4	55.4	54.6	53.7	54.6	53.7	53.7	52.8	52.8
82.5°	39.6	39.6	39.6	38.7	38.7	38.7	38.7	37.8	37.8	38.7
85°	24.6	24.6	24.6	24.6	23.8	24.6	23.8	23.8	23.8	24.6
87.5°	10.6	11.4	10.6	11.4	11.4	10.6	10.6	10.6	10.6	10.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)